Models: 105/110, 310/311

EXTENSION

STANDARD LIFT

MH

INSTALLATION INSTRUCTIONS AND OWNER'S MANUAL

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Wayne® Dalton
GARAGE DOORS & OPENERS

Table Of Contents

Parts Breakdown	**2**
Pre-Installation	**3**
Important Safety Instructions	3
Tools Required	3
Package Contents	3
Door Section Identification	4
Graduated End Hinge And Strut Identification	4
Removing an Existing Door	5
Preparing the Opening	5
Installation	**6**
Optional Installation	**14**
Door Arm Hookup	14
Lift Handles	14
Pull Down Rope	14
Maintenance	**15**
Cleaning Your Garage Door	15
Painting Your Garage Door	15
Clear Or Stained Finishes	15
Operation and Maintenance	15
Warranty	**17**
Dealer Locator Information	**18**

IMPORTANT NOTICES!

Wayne-Dalton highly recommends that you read and fully understand the Installation Instructions and Owner's Manual before you attempt this installation.

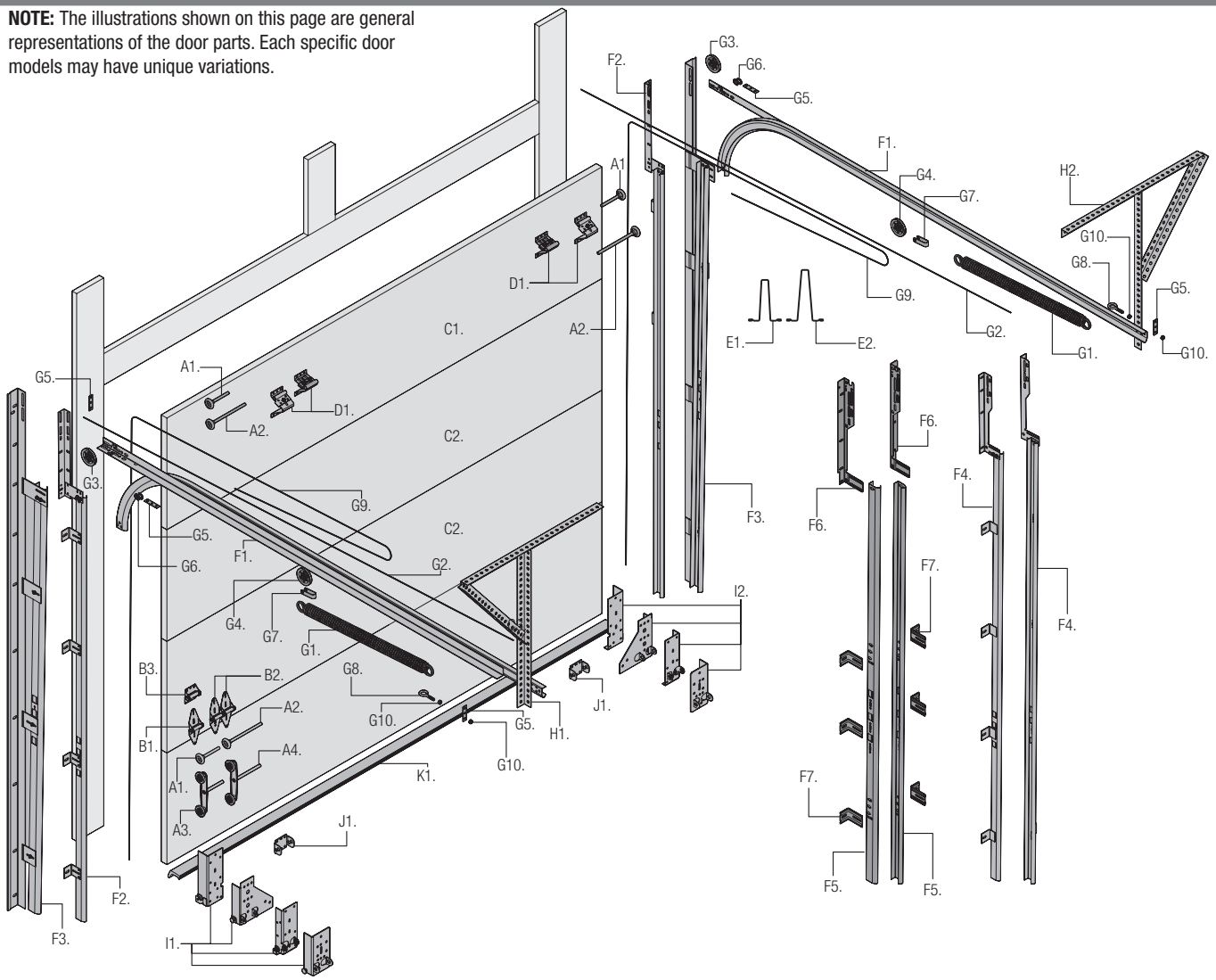
To avoid possible injury, read the enclosed instructions carefully before installing and operating the garage door. Pay close attention to all warnings and notes. After installation is complete, fasten this manual near garage door for easy reference.

The complete Installation Instructions and Owner's Manual are available at no charge from:
Wayne-Dalton, a Division Of Overhead Door Corporation,
P.O. Box 67, Mt. Hope, OH., 44660,
Or Online At **www.Wayne-Dalton.com**

Part No. 347752 REV1 03/08/2012

PARTS BREAKDOWN

NOTE: The illustrations shown on this page are general representations of the door parts. Each specific door models may have unique variations.



A. TRACK ROLLERS (AS REQUIRED):

- A1. Short Stem Track Rollers
- A2. Long Stem Track Rollers
- A3. Short Stem Tandem Track Rollers
- A4. Long Stem Tandem Track Rollers

B. GRADUATED END HINGES:

- B1. Single Graduated End Hinges (S.E.H.), Industry Standard
- B2. Double Graduated End Hinges (D.E.H.), Industry Standard
- B3. Half Center Hinges (As Required)

C. STACKED SECTIONS:

- C1. Top Section
- C2. Intermediate(s) Section (As Required)
- C3. Bottom Section

D. TOP FIXTURES (AS REQUIRED):

- D1. Top Fixture Assemblies

E. STRUT(S) (AS REQUIRED):

- E1. Strut (2" U-shaped)
- E2. Strut (3" U-shaped)

F. TRACKS:

- F1. Left Hand and Right Hand Horizontal Track Assemblies
- F2. Left Hand and Right Hand Riveted Track Assemblies (As Required)
- F3. Left Hand and Right Hand Wall Angle Track Assemblies (As Required)
- F4. Left Hand and Right Hand Vertical Track Assemblies (As Required)
- F5. Left Hand and Right Hand Vertical Tracks (As Required)
- F6. Left Hand and Right Hand Fully Adjustable (F.A.) Flag Angles (As Required)
- F7. Left Hand and Right Hand Fully Adjustable (F.A.) Jamb Brackets (As Required)

G. EXTENSION SPRING ASSEMBLY:

- G1. Extension Springs
- G2. Snubber Cables
- G3. Front Cable Lift Sheaves
- G4. Rear Cable Lift Sheaves
- G5. 3 Hole Clips (As Required)
- G6. S-Hooks (As Required)
- G7. Sheave Forks (As Required)
- G8. 5/16"–18 x 3-3/4" Eye Bolts (As Required)
- G9. Counterbalance Lift Cables
- G10. 5/16"–18 Hex Nuts (As Required)

H. REAR BACK HANGS:

- H1. Left Hand Rear Back Hang Assemblies
- H2. Right Hand Rear Back Hang Assemblies

I. BOTTOM CORNER BRACKET (AS REQUIRED):

- I1. Left Hand and Right Hand Bottom Corner Brackets

J. TRACK ROLLER CARRIERS (AS REQUIRED):

- J1. Track Roller Carriers

K. BOTTOM WEATHER SEAL (AS REQUIRED):

- K1. Bottom Weather Seal (Door Width)

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Important Safety Instructions

DEFINITION OF KEY WORDS USED IN THIS MANUAL:

⚠ WARNING

INDICATES A POTENTIALLY HAZARDOUS SITUATION WHICH; IF NOT AVOIDED, COULD RESULT IN SEVERE OR FATAL INJURY.

CAUTION: PROPERTY DAMAGE OR INJURY CAN RESULT FROM FAILURE TO FOLLOW INSTRUCTIONS.

IMPORTANT: REQUIRED STEP FOR SAFE AND PROPER DOOR OPERATION.

NOTE: Information assuring proper installation of the door.

READ THESE INSTRUCTIONS CAREFULLY BEFORE ATTEMPTING INSTALLATION. IF IN QUESTION ABOUT ANY OF THE PROCEDURES, DO NOT PERFORM THE WORK. INSTEAD, HAVE A TRAINED DOOR SYSTEMS TECHNICIAN DO THE INSTALLATION OR REPAIRS.

1. **READ AND FOLLOW ALL INSTALLATION INSTRUCTIONS.**
2. Wear protective gloves during installation to avoid possible cuts from sharp metal edges.
3. It is always recommended to wear eye protection when using tools, otherwise eye injury could result.
4. Avoid installing your new door on windy days. Door could fall during the installation causing severe or fatal injury.
5. Doors 12'-0" wide and over should be installed by two persons, to avoid possible injury.
6. Operate door only when it is properly adjusted and free from obstructions.
7. If a door becomes hard to operate, inoperative or is damaged, immediately have necessary adjustments and/ or repairs made by a trained door system technician using proper tools and instructions.
8. DO NOT stand or walk under a moving door, or permit anybody to stand or walk under an electrically operated door.
9. DO NOT place fingers or hands into open section joints when closing a door. Use lift handles/ gripping points when operating door manually.
10. DO NOT permit children to operate garage door or door controls. Severe or fatal injury could result should the child become entrapped between the door and the floor.
11. Due to constant extreme spring tension, do not attempt any adjustment, repair or alteration to any part of the door, especially to springs, spring brackets, bottom corner brackets, fasteners, counterbalance lift cables or supports. To avoid possible severe or fatal injury, have any such work performed by a trained door systems technician using proper tools and instructions.
12. On electrically operated doors, pull down ropes must be removed and locks must be removed or made inoperative in the open (unlocked) position.
13. Top section of door may need to be reinforced when attaching an electric opener. Check door and/ or opener manufacturer's instructions.
14. Visually inspect door and hardware monthly for worn and or broken parts. Check to ensure door operates freely.
15. Test electric opener's safety features monthly, following opener manufacturer's instructions.
16. NEVER hang tools, bicycles, hoses, clothing or anything else from horizontal tracks. Track systems are not intended or designed to support extra weight.
17. This door may not meet the building code wind load requirements in your area. For your safety, you will need to check with your local building official for wind load code requirements and building permit information.

After installation is complete, fasten this manual near the garage door.

IMPORTANT: STAINLESS STEEL OR PT2000 COATED LAG SCREWS MUST BE USED WHEN INSTALLING CENTER BEARING BRACKETS, END BRACKETS, JAMB BRACKETS, DRAWBAR OPERATOR MOUNTING/ SUPPORT BRACKETS AND DISCONNECT BRACKETS ON TREATED LUMBER (PRESERVATIVE-TREATED). STAINLESS STEEL OR PT2000 LAG SCREWS ARE NOT NECESSARY WHEN INSTALLING PRODUCTS ON UN-TREATED LUMBER.

NOTE: It is recommended that 5/16" lag screws are pilot drilled using a 3/16" drill bit, prior to fastening.

IMPORTANT: WHEN INSTALLING 5/16" LAG SCREWS USING AN ELECTRIC DRILL/ DRIVER, THE DRILL/ DRIVERS CLUTCH MUST BE SET TO DELIVER NO MORE THAN 200 IN-LBS OF TORQUE. FASTENER FAILURE COULD OCCUR AT HIGHER SETTINGS.

⚠ WARNING

PRIOR TO WINDING OR MAKING ADJUSTMENTS TO THE SPRINGS, ENSURE YOU'RE WINDING IN THE PROPER DIRECTION AS STATED IN THE INSTALLATION INSTRUCTIONS. OTHERWISE, THE SPRING FITTINGS MAY RELEASE FROM SPRING IF NOT WOUND IN THE PROPER DIRECTION AND COULD RESULT IN SEVERE OR FATAL INJURY.

IMPORTANT: RIGHT AND LEFT HAND IS ALWAYS DETERMINED FROM INSIDE THE BUILDING LOOKING OUT

Tools Required

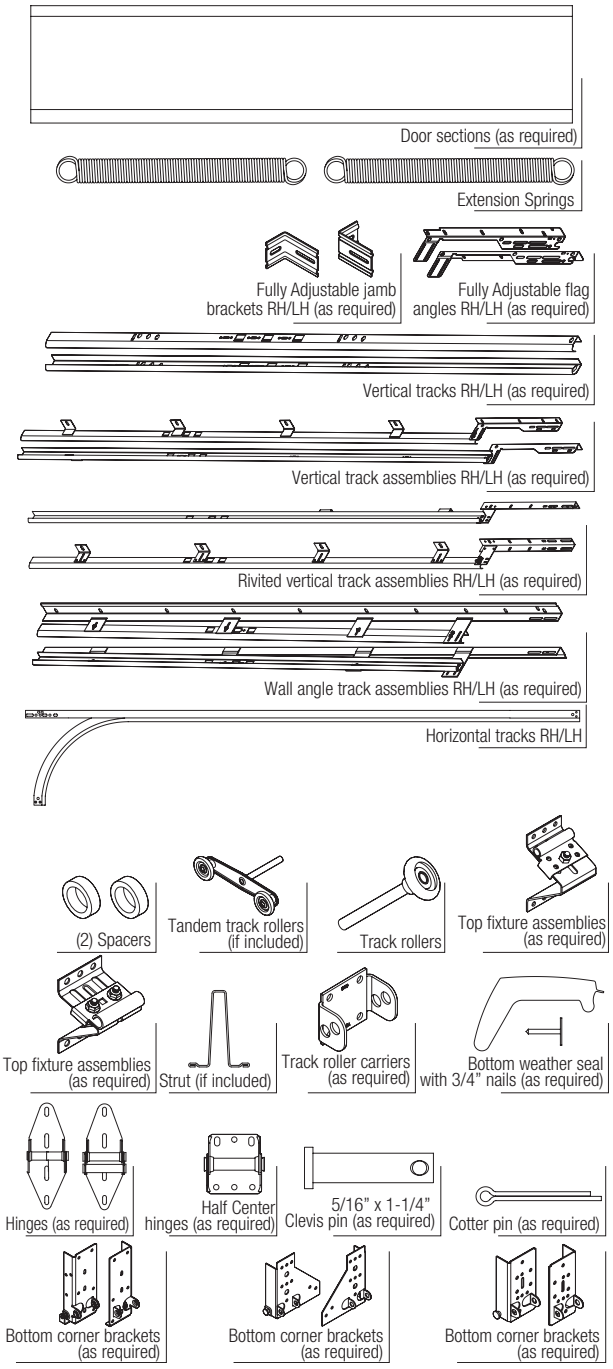
- Power drill
- Drill bits: 1/8", 3/16", 9/32", 7/16", 1/2"
- Ratchet wrench
- Socket driver: 7/16"
- Sockets: 7/16", 1/2", 9/16", 5/8"
- Phillips head screwdriver
- Locking Pliers
- (2) Vice clamps
- Wrenches: 3/8", 7/16", 1/2", 9/16", 5/8"
- Hammer
- Tape Measure

Step Ladder

- Level
- Pencil
- Leather gloves
- Safety glasses

Package Contents

NOTE: Depending on the door model, some parts listed will not be supplied if not required. Rear Back Hangs may not be included with your door.


Door sections (as required)
Extension Springs
Fully Adjustable jamb brackets RH/LH (as required)
Fully Adjustable flag angles RH/LH (as required)
Vertical tracks RH/LH (as required)
Vertical track assemblies RH/LH (as required)
Rivited vertical track assemblies RH/LH (as required)
Wall angle track assemblies RH/LH (as required)
Horizontal tracks RH/LH
(2) Spacers
Tandem track rollers (if included)
Track rollers
Top fixture assemblies (as required)
Top fixture assemblies (as required)
Strut (if included)
Track roller carriers (as required)
Bottom weather seal with 3/4" nails (as required)
Hinges (as required)
Half Center hinges (as required)
5/16" x 1-1/4" Clevis pin (as required)
Cotter pin (as required)
Bottom corner brackets (as required)
Bottom corner brackets (as required)
Bottom corner brackets (as required)

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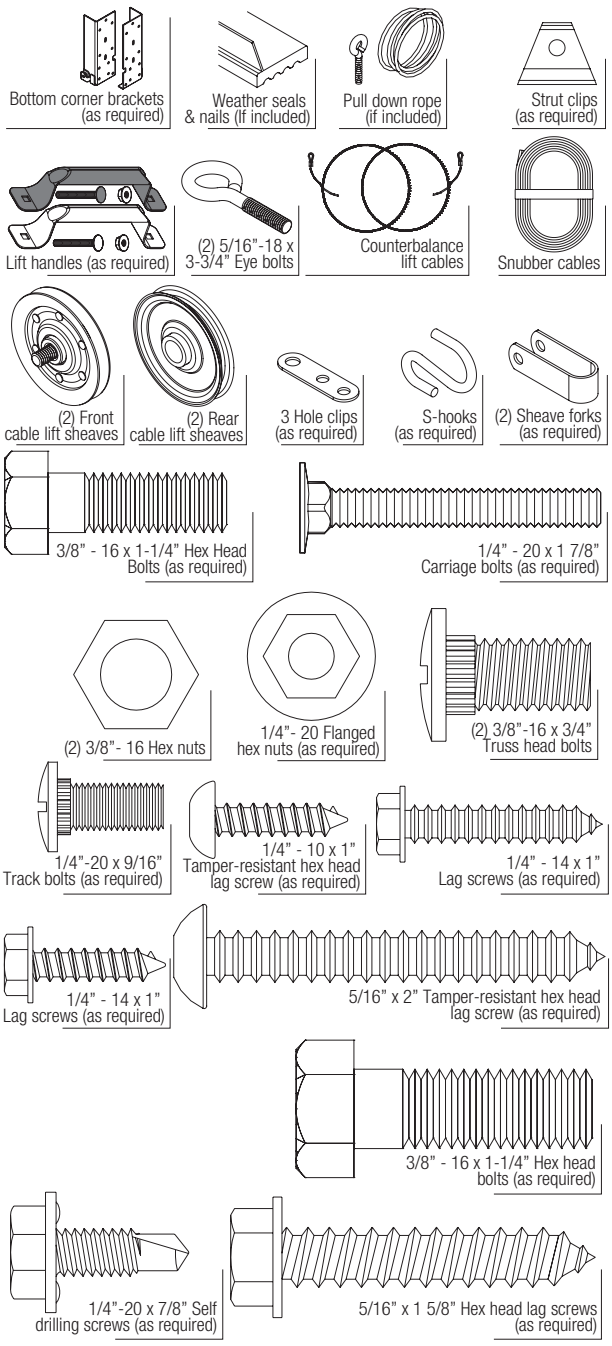

Bottom corner brackets (as required)
Weather seals & nails (If included)
Pull down rope (if included)
Strut clips (as required)
Lift handles (as required)
(2) 5/16"-18 x 3-3/4" Eye bolts
Counterbalance lift cables
Snubber cables
(2) Front cable lift sheaves
(2) Rear cable lift sheaves
3 Hole clips (as required)
S-hooks (as required)
(2) Sheave forks (as required)
3/8" - 16 x 1-1/4" Hex Head Bolts (as required)
1/4" - 20 x 1 7/8" Carriage bolts (as required)
(2) 3/8"- 16 Hex nuts
1/4"- 20 Flanged hex nuts (as required)
(2) 3/8"-16 x 3/4" Truss head bolts
1/4"-20 x 9/16" Track bolts (as required)
1/4" - 10 x 1" Tamper-resistant hex head lag screw (as required)
1/4" - 14 x 1" Lag screws (as required)
1/4" - 14 x 1" Lag screws (as required)
5/16" x 2" Tamper-resistant hex head lag screw (as required)
3/8" - 16 x 1-1/4" Hex head bolts (as required)
1/4"-20 x 7/8" Self drilling screws (as required)
5/16" x 1 5/8" Hex head lag screws (as required)

Door Section Identification

When installing your door, you must use sections of the appropriate height in the right stacking location. Determine, what sections you need to use in what order depends on the design of your door.

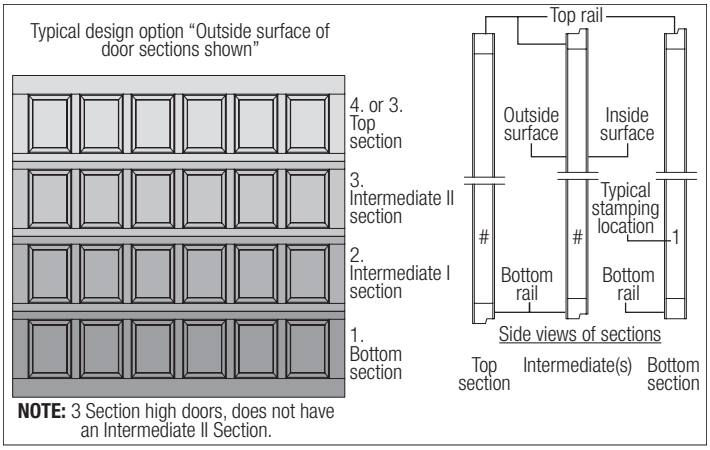
Sections are stamped for identification, #1, #2, #3, #4, #5, #6, #7, and #8. The stamp, located on each side of the sections identifies the stacking sequence. The sequence is always determined by #1 being the bottom section to #7 or #8 being the highest top section. If the stamp on the section is illegible, refer to the section side view illustration. The section side view illustration shows the section profile of all sections, and can also be used to identify each section.

The **BOTTOM SECTION** can be identified by #1.

The **INTERMEDIATE I** SECTION can be identified by #2.

The **INTERMEDIATE II** SECTION can be identified by #3, for a 4 section high door only.

The **INTERMEDIATE III** SECTION can be identified by #4, for a 5 section high door only.



Graduated End Hinge And Strut Identification

Graduated End Hinge Schedule			
Door Height	Track	Section Type	Graduated End Hinge Number
3 Section High Door	2"	Top	N/A
		Intermediate I	#2
		Bottom	#1
	3"	Top	N/A
		Intermediate I	#4
		Bottom	#3
4 Section High Door	2"	Top	N/A
		Intermediate II	3#
		Intermediate I	2#
		Bottom	1#
	3"	Top	N/A
		Intermediate II	5#
		Intermediate I	4#
		Bottom	3#
5 Section High Door	2"	Top	N/A
		Intermediate III	4#
		Intermediate II	3#
		Intermediate I	2#
		Bottom	1#
	3"	Top	N/A
		Intermediate III	6#
		Intermediate II	5#
		Intermediate I	4#
		Bottom	3#

NOTE: Center hinge(s) use #1 graduated end hinges at each pre-drilled vertical stile location. The pre-drilled locations are located at the top and or bottom rails on the inside of the section surface.

NOTE: Some doors will receive half center hinge(s). These will be installed in between the center hinge(s) and graduated end hinge(s).

STRUT IDENTIFICATION:

Identify your struts to determine which ones are long strut(s) or short strut(s).

Short Strut(s) are typically installed along the top rail of the top section and or along the bottom rail of the bottom section.

Long Strut(s) are typically installed along the top and or bottom rails of sections. Measure the height of the long strut(s) to determine if you have 2" or 3".

NOTE: Some struts also may or may not have holes in them. If they don't, then prior to installing the strut and hinge to the section surface, you may have to drill a 3/16" hole for the appropriate fastener on one or both sides of the strut legs.

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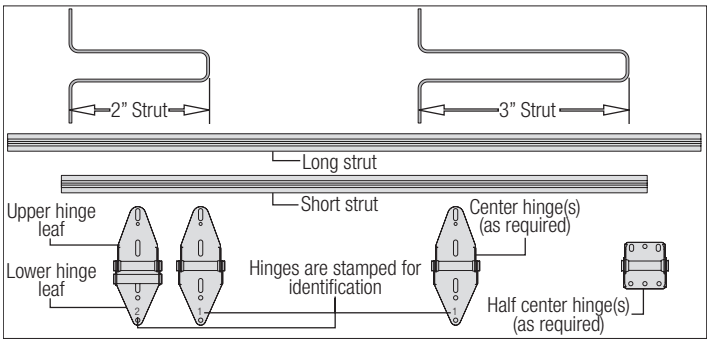
Strutting Schedule for Door Heights Less Than Or Equal to 8'0"			
Product	Door Width		
	Up To and Including 12'2"	From 12'3" To 16'0"	From 16'1" To 18'0"
Model 105	N/A	(4) 2" Struts	N/A
Model 110	N/A	(4) 2" Struts	(4) 3" Struts
Model 310/311	N/A	(4) 2" Struts	(4) 3" Struts



Removing an Existing Door

IMPORTANT: COUNTERBALANCE SPRING TENSION MUST ALWAYS BE RELEASED BEFORE ANY ATTEMPT IS MADE TO START REMOVING AN EXISTING DOOR.

⚠ WARNING

A POWERFUL SPRING RELEASING ITS ENERGY SUDDENLY CAN CAUSE SEVERE OR FATAL INJURY. TO AVOID INJURY, HAVE A TRAINED DOOR SYSTEMS TECHNICIAN, USING PROPER TOOLS AND INSTRUCTIONS, RELEASE THE SPRING TENSION.

For detailed information see supplemental instructions "Removing an Existing Door/ Preparing the Opening". These instructions are not supplied with the door, but are available at no charge from Wayne-Dalton, A Division Of Overhead Door Corporation, P.O. Box 67, Mt. Hope, OH., 44660, or at **www.Wayne-Dalton.com**.

Preparing the Opening

IMPORTANT: IF YOU JUST REMOVED YOUR EXISTING DOOR OR YOU ARE INSTALLING A NEW DOOR, COMPLETE ALL STEPS IN PREPARING THE OPENING.

To ensure secure mounting of track brackets, side and center brackets, or steel angles to new or retro-fit construction, it is recommended to follow the procedures outlined in DASMA technical data sheets #156, #161 and #164 at **www.dasma.com**.

The inside perimeter of your garage door opening should be framed with wood jamb and header material. The jambs and header must be securely fastened to sound framing members. It is recommended that 2" x 6" lumber be used. The jambs must be plumb and the header level. The jambs should extend a minimum of 12" (305 mm) above the top of the opening for Torsion counterbalance systems. For low headroom applications, the jambs should extend to the ceiling height. Minimum side clearance required, from the opening to the wall, is 3-1/2" (89 mm), for 2" track. Minimum side clearance required, from the opening to the wall, is 4-1/2" (114 mm), for 3" track.

IMPORTANT: CLOSELY INSPECT JAMBS, HEADER AND MOUNTING SURFACE. ANY WOOD FOUND NOT TO BE SOUND, MUST BE REPLACED.

For Torsion counterbalance systems, a suitable mounting surface (2" x 6") must be firmly attached to the wall, above the header at the center of the opening.

NOTE: Drill a 3/16" pilot hole in the mounting surface to avoid splitting the lumber. Do not attach the mounting surface with nails.

WEATHERSTRIPS (MAY NOT BE INCLUDED):

Depending on the size of your door, you may have to cut or trim the weatherstrips (if necessary) to properly fit into the header and jambs.

NOTE: If nailing product at 40°F or below, pre-drilling is required.

NOTE: Do not permanently attach weatherstrips to the header and jambs at this time.

For the header, align the weatherstrip 1/8" to 1/4" inside the header edge, and temporarily secure it to the header with equally spaced nails. Starting at either side of the jamb, fit the weatherstrip up tight against the temporarily attached weatherstrip in the header and 1/8" to 1/4" inside the jamb edge. Temporarily secure the weatherstrip with equally spaced nails. Repeat for other side. This will keep the bottom section from falling out of the opening during installation. Equally space nails approximately 12" to 18" apart.

Backroom requirement: Backroom is defined as the distance needed from the opening back into the garage to allow the door to open fully.

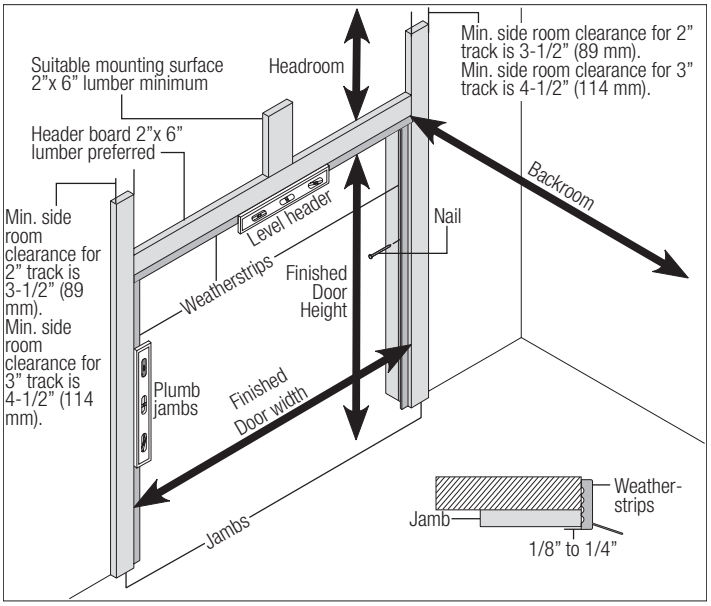
Headroom requirement: Headroom is defined as the space needed above the top of the door for tracks, springs, etc. to allow the door to open properly. If the door is to be motor operated, 2-1/2" (64 mm) of additional headroom is required.

BACKROOM REQUIREMENTS

Door Height	Track	Manual Lift	Motor Operated
6'0" to 7'0"	12" Or 15" Radius	98" (2489 mm)	125" (3175 mm)
7'1" to 8'0"		110" (2794 mm)	137" (3480 mm)

HEADROOM REQUIREMENTS

Track Type	Space Needed
12" Radius	12 1/2" (318 mm)
15" Radius	14 1/2" (368 mm)


Suitable mounting surface 2"x 6" lumber minimum
Headroom
Min. side room clearance for 2" track is 3-1/2" (89 mm).
Min. side room clearance for 3" track is 4-1/2" (114 mm).
Header board 2"x 6" lumber preferred
Backroom
Min. side room clearance for 2" track is 3-1/2" (89 mm).
Level header
Nail
Weatherstrips
Finished Door Height
Min. side room clearance for 3" track is 4-1/2" (114 mm).
Plumb jambs
Finished Door width
Jambs
Weather-strips
Jamb
1/8" to 1/4"

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INSTALLATION

Before installing your door, be certain that you have read and followed all of the instructions covered in the pre-installation section of this manual. Failure to do so may result in an improperly installed door.

IMPORTANT: WOOD DOORS MUST BE COMPLETELY FINISHED (3 TOTAL COATS, INCLUDING PRIMER COAT) PRIOR TO INSTALLATION, TO ENSURE THAT THE INTERIOR AND EXTERIOR SURFACES, AS WELL AS ALL EDGES OF THE DOORS ARE PROPERLY PROTECTED AGAINST MOISTURE OR OTHER CONTAMINANTS. WOOD DOORS, IN A NON-FINISHED CONDITION, MUST BE TRANSPORTED AND STORED SO THE WOOD SURFACES ARE NOT EXPOSED TO MOISTURE OR OTHER CONTAMINANTS. IMPROPER TRANSPORTATION, STORAGE OR DELAYS IN FINISHING, THAT ALLOWS EXPOSURE OF THE WOOD DOOR SURFACES TO MOISTURE OR OTHER CONTAMINANTS WILL RESULT IN THE WARRANTY BEING VOIDED.

NOTE: Reference TDS 160 for general garage door terminology at **www.dasma.com**.

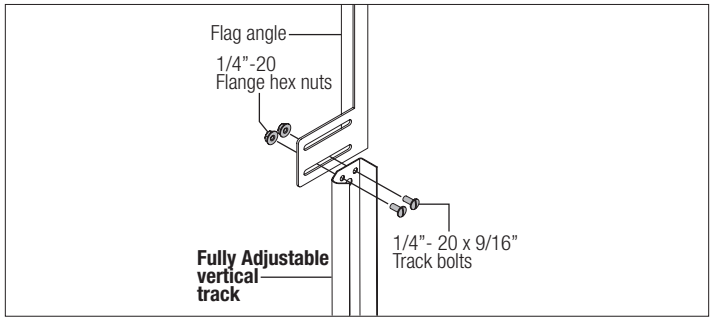
1 Fully Adjustable Flag Angles

Tools: None

NOTE: If you have a wall angle track assembly or if you already have flag angles pre-attached to the vertical tracks, skip this step. Refer to Package Contents / Parts Breakdown, to determine if you have flag angles.

NOTE: Flag angles are right and left handed.

If you have Fully Adjustable vertical tracks, hand tighten the left hand flag angle to the left hand vertical track using (2) 1/4"-20 x 9/16" track bolts and (2) 1/4"-20 flange hex nuts. Repeat for other side. Flange nuts will be secured after flag angle spacing is completed in step, Top Section.



2 Fully Adjustable Jamb Brackets

Tools: None

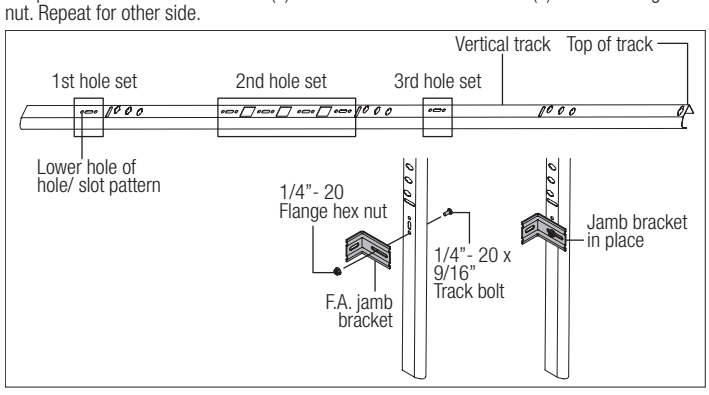
NOTE: If you have a wall angle track assembly or if you already have jamb brackets pre-attached to the vertical tracks, skip this step. Refer to Package Contents / Parts Breakdown, to determine if you have jamb brackets.

NOTE: The bottom jamb bracket is always the shortest bracket, while the center jamb bracket is the next tallest. If three jamb brackets per side are included with your door, you will have received a top jamb bracket, which is the tallest.

To attach the bottom jamb bracket, locate lower hole of the hole/ slot pattern of the 1st hole set on the vertical track. Align the slot in the jamb bracket with the lower hole of the hole/ slot pattern. Secure jamb bracket using (1) 1/4"-20 x 9/16" track bolt and (1) 1/4"-20 flange hex nut. Repeat for other side.

Place the center jamb bracket over the lower hole of the hole/ slot pattern that is centered between the bottom jamb bracket and flag angle of the 2nd hole set. Secure jamb bracket using (1) 1/4"-20 x 9/16" track bolt and (1) 1/4"-20 flange hex nut. Repeat for other side.

If a top jamb bracket was included, secure it to vertical track using the lower hole of the hole/ slot pattern in the 3rd hole set and (1) 1/4"-20 x 9/16" track bolt and (1) 1/4"-20 flange hex nut. Repeat for other side.



3 Bottom Weather Seal

Tools: Hammer, Tape Measure, Saw Horses

NOTE: If a bottom weather seal is supplied, complete this step.

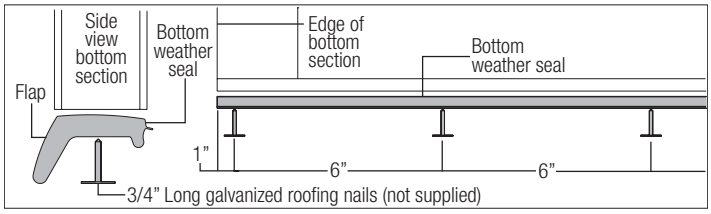
NOTE: Refer to Door Section Identification / Parts Breakdown.

Place the bottom section face down on a couple of sawhorses or flat clean/ smooth surface. Align the bottom weather seal with the flap pointing towards the outside surface of the bottom section.

Starting at one end of the door, measure inward 1" and attach the bottom weather seal to the bottom of the bottom section with 3/4" long galvanized roofing nails (not supplied). Now stretch the bottom weather seal slightly and nail the rest of the bottom weather seal to the bottom of the bottom section every 6".

Once the bottom weather seal is fastened cut off any extra material so that the bottom weather seal is even with both ends of the bottom section.

NOTE: Verify bottom weather seal is aligned with bottom section. If there is more than 1/2" excess weather seal on either side, trim weather seal even with bottom section.



4 Bottom Corner Brackets

Tools: Power Drill, 9/32" Drill Bit, Socket Driver 7/16", Wrench 7/16"

NOTE: Refer to Door Section Identification / Parts Breakdown, to determine which bottom corner brackets were supplied with your door.

⚠ WARNING

FAILURE TO ENSURE TIGHT FIT OF CABLE LOOP OVER COTTER PIN OR MILFORD PIN COULD RESULT IN COUNTERBALANCE LIFT CABLE COMING OFF THE PIN, ALLOWING THE DOOR TO FALL, POSSIBLY RESULTING IN SEVERE OR FATAL INJURY.

With the bottom section facing down from the previous step, uncoil the counterbalance lift cables.

Starting on the left hand side, either:

Place the cable loop into position between the two holes on the side of the left hand bottom corner bracket. Slide a clevis pin through the innermost hole, cable loop, and outermost hole, of the bottom corner bracket. Slide a washer onto the clevis pin and secure in place by inserting a cotter pin into the hole of the clevis pin. Bend the ends of the cotter pin outwards to secure it in place. Repeat for other bottom corner bracket.

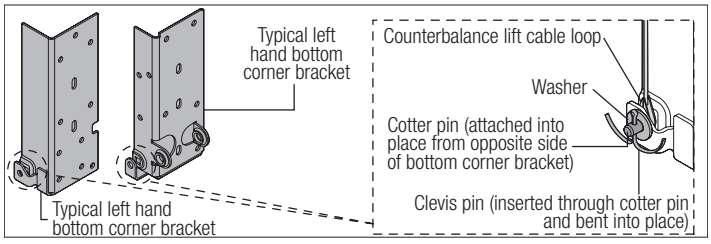
Place the cable loop on the milford pin of the bottom corner bracket. Repeat for other bottom corner bracket.

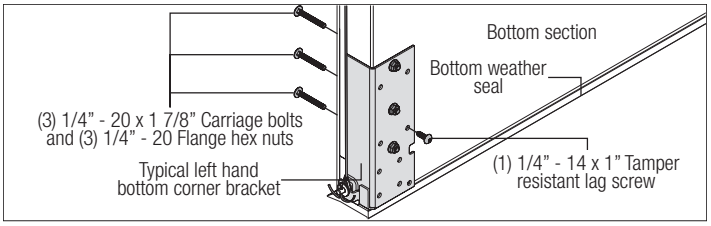
Next, starting on the left hand side, align the left hand bottom corner bracket horizontally with the bottom edge of the bottom section and also align the bottom corner bracket vertically with the left bottom edge of the bottom section. Using the bottom corner bracket as a template, mark and pre-drill 9/32" diameter holes through the bottom section. Attach the bottom corner bracket to the bottom section using 1/4"-20 x 1-7/8" carriage bolts and 1/4"–20 flange hex nuts, as shown. Repeat the same process for other side. Mark and drill a pilot holes 1" deep into the bottom section with a 1/8" drill bit. Secure the bottom corner brackets to the bottom section using (1) 1/4"-14 x 1" tamper resistant lag screw, as shown. Repeat the same process for the right hand side.

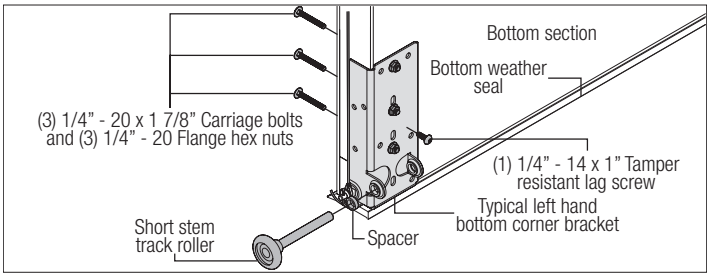
IMPORTANT: BE EXTREMELY CAREFUL NOT TO DRILL THRU THE SECTION. ONLY DRILL 1" DEEP.

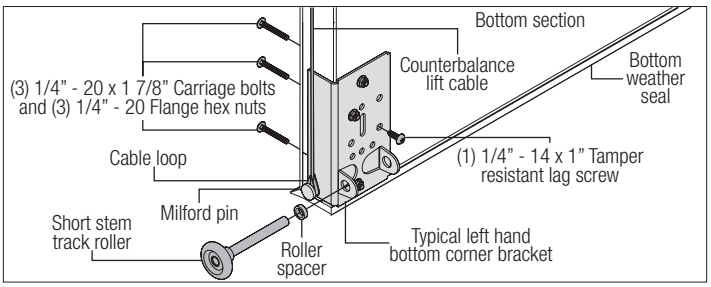
NOTE: All doors are provided with the tamper resistant fastener for the bottom corner brackets. However, the professional installer is most likely to have the proper tool to install this fastener. If the homeowner does not have the proper tool to install the tamper resistant fastener, use a regular 1/4"-20 x 1-7/8" carriage bolt and a 1/4"–20 flange hex nut in its place.

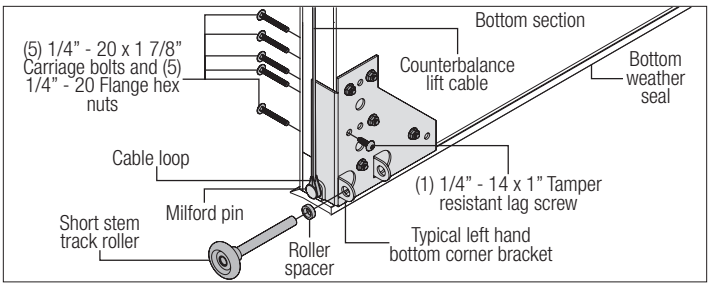
If applicable, insert a short stem track roller into each of the bottom corner brackets, as shown.




Bottom section
Bottom weather seal
(3) 1/4" - 20 x 1 7/8" Carriage bolts and (3) 1/4" - 20 Flange hex nuts
(1) 1/4" - 14 x 1" Tamper resistant lag screw
Typical left hand bottom corner bracket


Bottom section
Bottom weather seal
(3) 1/4" - 20 x 1 7/8" Carriage bolts and (3) 1/4" - 20 Flange hex nuts
(1) 1/4" - 14 x 1" Tamper resistant lag screw
Typical left hand bottom corner bracket
Short stem track roller
Spacer


Bottom section
Counterbalance lift cable
Bottom weather seal
(3) 1/4" - 20 x 1 7/8" Carriage bolts and (3) 1/4" - 20 Flange hex nuts
Cable loop
(1) 1/4" - 14 x 1" Tamper resistant lag screw
Milford pin
Short stem track roller
Roller spacer
Typical left hand bottom corner bracket


Bottom section
(5) 1/4" - 20 x 1 7/8" Carriage bolts and (5) 1/4" - 20 Flange hex nuts
Counterbalance lift cable
Bottom weather seal
Cable loop
(1) 1/4" - 14 x 1" Tamper resistant lag screw
Milford pin
Short stem track roller
Roller spacer
Typical left hand bottom corner bracket

5 Track Roller Carriers

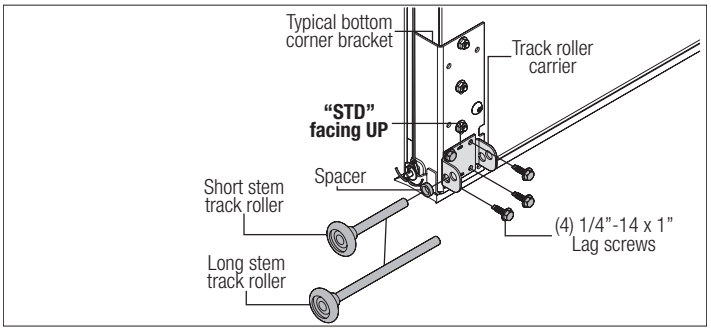
Tools: Power Drill, 9/32" Drill Bit, Socket Driver 7/16", Wrench 7/16"

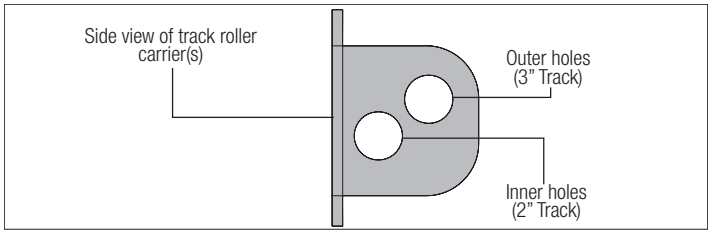
NOTE: If you don't have track roller carriers, then skip this step. Refer to Package Contents / Parts Breakdown, to determine if track roller carriers were supplied with your door.

Starting on left hand side of the bottom section, attach the track roller carrier with the stamp **"STD" facing UP** to the bottom corner bracket by aligning the four holes of the track roller carrier with the four holes in the bottom corner bracket. Mark and pre-drill (4) 1/8" diameter holes and secure the track roller carrier to the bottom corner bracket and bottom section using (4) 1/4"-14 x 1" lag screws.

Insert a short/long stem track roller and spacer into the inner/outer holes of the track roller carrier. Repeat the same process for the right hand side.

NOTE: The track roller carrier's inner holes are used on doors with 2" track applications with a short stem track roller; the outer holes are used on doors with 3" track applications with a long stem track roller.





6 Strutting

Tools: Power Drill, 1/8" Drill Bit, Socket Driver 7/16", Tape Measure

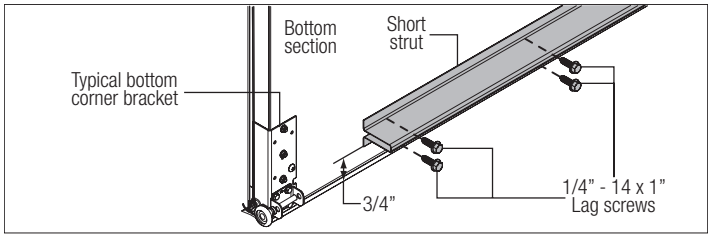
NOTE: Refer to the Door Section Identification and Strut Identification, to determine if the bottom section requires a short strut to be installed.

Lay the short strut onto the bottom rail of the bottom section. Position the bottom of the strut 3/4" up from the bottom edge of the bottom section. Center the short strut from side to side on the section surface.

Drill pilot holes, 1" deep into the bottom section using a 1/8" drill bit.

IMPORTANT: BE EXTREMELY CAREFUL NOT TO DRILL THRU THE SECTION. ONLY DRILL 1" DEEP.

Attach the strut using (2) 1/4"-14 x 1" lag screws at each on each end and center stile (aligned with hinges) locations.



7 Graduated End And Center Hinges

Tools: Power Drill, 1/8"/9/32" Drill Bit, Socket Driver 7/16", Tape

NOTE: Refer to the Door Section Identification, Graduated End Hinge and Strut Identification, to determine the appropriate hinges and or struts for your sections.

Using the appropriate graduated end hinges for the ends and depending on the width of your door, enough center hinge(s) for each pre-drilled hole location.

Starting at the upper left hand corner of the bottom section. Position the lower hinge leaf of the appropriate graduated end hinge onto the upper corner of the bottom section. Align the slots of the lower hinge leaf with the pre-drilled holes in the bottom section. Next, lay a long strut (if applicable) over the lower hinge leaf and over the top rail of the bottom section. Center the long strut from side to side, as shown.

FOR SINGLE GRADUATED END HINGES WITHOUT A STRUT:

Starting on the left hand side, attach the upper slot of the graduated end hinge to the bottom section using (1) 1/4"-20 x 1-7/8" carriage bolt and (1) 1/4"–20 flange hex nut. Next, secure the lower slot of the graduated end hinge to the bottom section using (1) 1/4"-20 x 1-7/8" carriage bolt and (1) 1/4"–20 flange hex nut, as shown. Repeat same process for other side.

FOR SINGLE GRADUATED END HINGES WITH A STRUT (IF APPLICABLE):

Starting on the left hand side, attach the upper slot of the graduated end hinge, (1) strut clip and the upper leg of strut to the bottom section using (1) 1/4"-20 x 1-7/8" carriage bolt and (1) 1/4"–20 flange hex nut. Next secure the bottom leg of strut, the lower slot of the graduated end hinge to the bottom section (1) 1/4"-20 x 1-7/8" carriage bolt and (1) 1/4"–20 flange hex nut, as shown. Repeat same process for other side.

FOR DOORS WITH DOUBLE GRADUATED END HINGES:

Position the second graduated end hinge next to the first (single) graduated end hinge. Using the second graduated end hinge as a template, drill pilot holes, 1" deep into the bottom section with a 1/8" drill bit.

IMPORTANT: BE EXTREMELY CAREFUL NOT TO DRILL THRU THE SECTION. ONLY DRILL 1" DEEP.

Attach the upper leg of strut (if applicable) to the upper slot of the graduated end hinge to the bottom section using (1) 1/4"-14 x 1" lag screw. Next secure the bottom leg of strut (if applicable) to the lower slot of the graduated end hinge to the bottom section using (1) 1/4"-14 x 1" lag screw, as shown. Repeat same process for other side.

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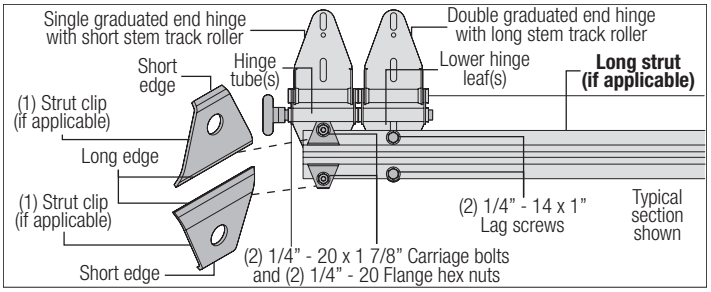
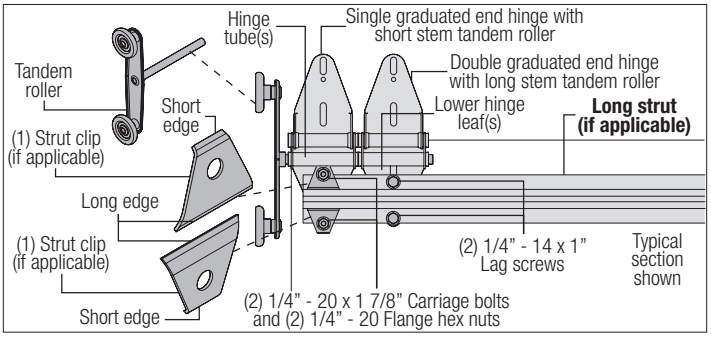

Single graduated end hinge with short stem track roller
Double graduated end hinge with long stem track roller
Short edge
Hinge tube(s)
Lower hinge leaf(s)
Long strut (if applicable)
(1) Strut clip (if applicable)
Long edge
(1) Strut clip (if applicable)
(2) 1/4" - 14 x 1" Lag screws
Typical section shown
(2) 1/4" - 20 x 1 7/8" Carriage bolts and (2) 1/4" - 20 Flange hex nuts
Short edge

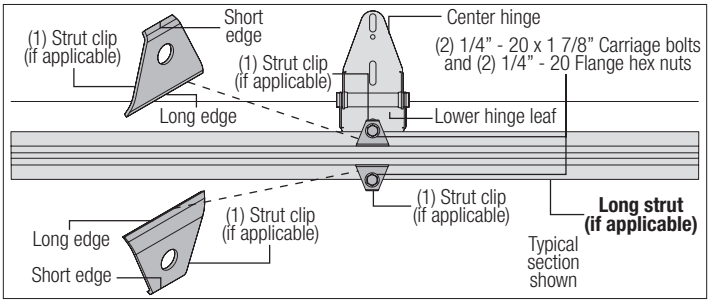

Hinge tube(s)
Single graduated end hinge with short stem tandem roller
Tandem roller
Double graduated end hinge with long stem tandem roller
Short edge
Lower hinge leaf(s)
Long strut (if applicable)
(1) Strut clip (if applicable)
Long edge
(1) Strut clip (if applicable)
(2) 1/4" - 14 x 1" Lag screws
Typical section shown
(2) 1/4" - 20 x 1 7/8" Carriage bolts and (2) 1/4" - 20 Flange hex nuts
Short edge

FOR CENTER HINGES WITHOUT A STRUT:

Starting on the left hand side, attach the upper slot of the center hinge to the bottom section using (1) 1/4"-20 x 1-7/8" carriage bolt and (1) 1/4"–20 flange hex nut. Next, secure the lower slot of the center hinge to the bottom section using (1) 1/4"-20 x 1-7/8" carriage bolt and (1) 1/4"–20 flange hex nut, as shown. Repeat same process for other center hinges.

FOR CENTER HINGES WITH A STRUT (IF APPLICABLE):

Starting on the left hand side, attach the upper slot of the center hinge, (1) strut clip and the upper leg of strut to the bottom section using (1) 1/4"-20 x 1-7/8" carriage bolt and (1) 1/4"–20 flange hex nut. Next secure the bottom leg of strut, the lower slot of the center hinge to the bottom section (1) 1/4"-20 x 1-7/8" carriage bolt and (1) 1/4"–20 flange hex nut, as shown. Repeat same process for other center hinges.


(1) Strut clip (if applicable)
Short edge
Center hinge
(2) 1/4" - 20 x 1 7/8" Carriage bolts and (2) 1/4" - 20 Flange hex nuts
(1) Strut clip (if applicable)
Long edge
Lower hinge leaf
(1) Strut clip (if applicable)
Long strut (if applicable)
(1) Strut clip (if applicable)
Long edge
Short edge
Typical section shown

If you have single graduated end hinges, insert a short stem track roller / short stem tandem track roller (if included) into the hinge tube on each side.

If you have double graduated end hinges, insert a long stem track roller / short stem tandem track roller (if included) into the hinge tubes on each side.

IMPORTANT: WHEN PLACING TRACK ROLLERS / TANDEM TRACK ROLLER (IF INCLUDED) INTO GRADUATED END HINGES NUMBER 2 AND HIGHER, THE TRACK ROLLER / TANDEM TRACK ROLLER (IF INCLUDED) GOES INTO TUBE FURTHEST AWAY FROM SECTION.

8 Half Center Hinges

Tools: Power drill, 7/16" Socket driver, Tape measure

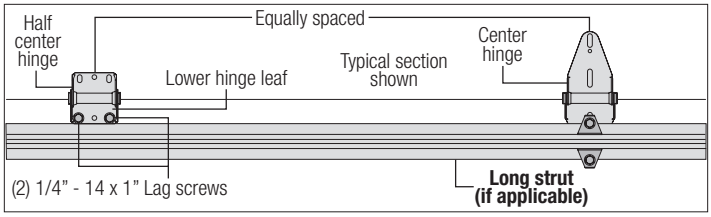
NOTE: If you don't have half center hinges, then skip this step. Refer to Package Contents / Parts Breakdown, to determine if you have half center hinges.

Using a tape measure, position the half center hinges equally spaced in between the center hinges and equally spaced in between the center hinges and the graduated end hinges. Position the holes of the lower hinge leaf onto the bottom section surface, as shown. Using the half center hinge as a template, drill pilot holes, 1" deep into the bottom section using a 1/8" drill bit.

IMPORTANT: BE EXTREMELY CAREFUL NOT TO DRILL THRU THE SECTION. ONLY DRILL 1" DEEP.

Attach the lower hinge leaf of the center hinge to the bottom section using (2) 1/4"-14 x 1" lag screws. Repeat for other half center hinge(s). Set the bottom section aside.

Place the Intermediate I section face down on a couple of sawhorses or flat clean/ smooth surface. Reference step Graduated End And Center Hinges and this step to attach the long struts (if applicable) and hinges to the top rail of the sections in the same manner as was done for the bottom section. Repeat the same process for the other Intermediate section(s) if applicable, except top section.



9 Top Fixtures

Tools: Power drill, 7/16" Socket driver

NOTE: Refer to Door Section Identification / Parts Breakdown.

NOTE: If your door came with two top fixtures, then one top fixture are required for each side.

NOTE: If your door came with four top fixtures, then two top fixtures are required for each side.

Place the top section face down on a couple of sawhorses or flat clean/ smooth surface.

NOTE: Refer to illustrations to determine which top fixture was supplied with your door.

First, you'll need to measure the width of the top rail of the top section, to determine, the proper location and the correct orientation of the top fixtures.

ON TOP SECTIONS WITH A 5-3/16" TOP RAIL: Measure down from the top of the top section 3-1/4" and make a small mark. Align the top of the top fixture base / top fixture assembly with the mark previously made and even with the edge of the section.

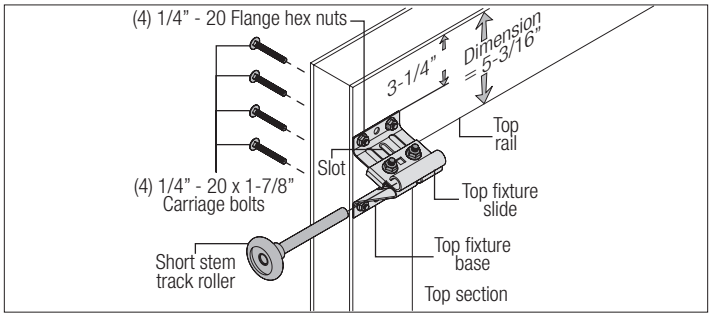
NOTE: The slotted half of the top fixture base / top fixture assembly should be facing upwards.

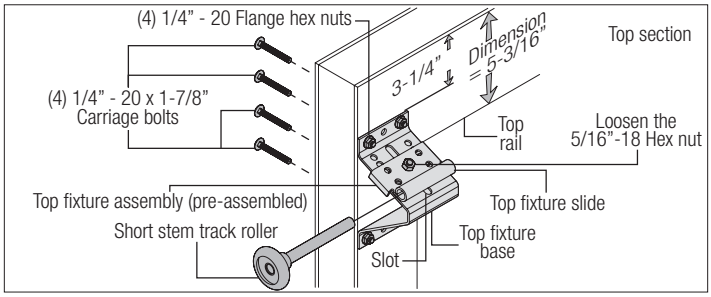
ON TOP SECTIONS WITH A 3-1/8" TOP RAIL: Measure down from the top of the top section 1-1/8" and make a small mark. Align the top of the top fixture base / top fixture assembly with the mark previously made and even with the edge of the section.

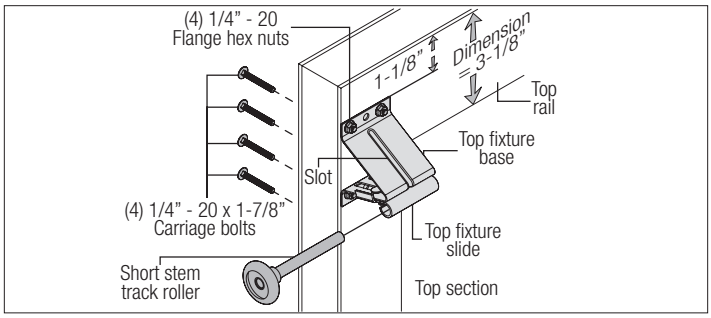
NOTE: The slotted half of the top fixture base / top fixture assembly should be facing downwards.

Using the top fixture base as a template, mark and pre-drill (4) 9/32" diameter holes through the top section. Attach the top fixture base to the top section using (4) 1/4"-20 x 1-7/8" carriage bolts and (4) 1/4"–20 flange hex nuts. Repeat the same process for the right hand side.

The top fixtures will be tightened and adjusted later, in step, Adjusting Top Fixtures. Insert a short stem track roller into each of the top fixture slides.







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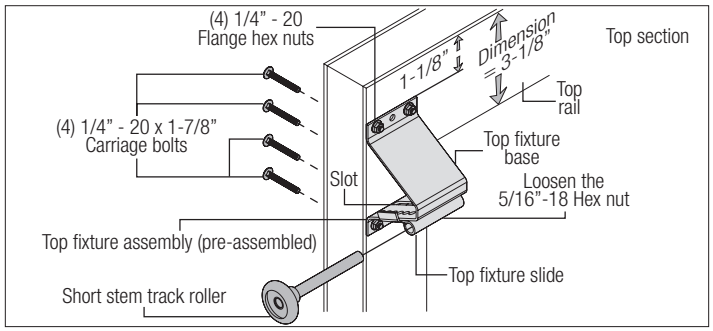


10 Strutting For Top Section

Tools: Power drill, 7/16" Socket driver

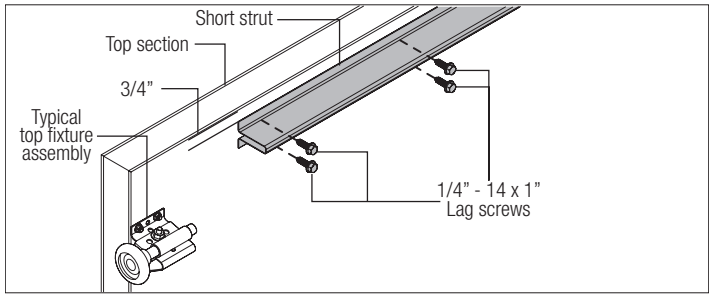
NOTE: Refer to the Door Section Identification and Strut Identification, to determine if the top section requires a short strut to be installed.

Lay the short strut onto the top rail of the top section. Position the top of the strut 3/4" down from the top edge of the top section. Center the short strut from side to side on the section surface.

Drill pilot holes, 1" deep into the top section using a 1/8" drill bit.

IMPORTANT: BE EXTREMELY CAREFUL NOT TO DRILL THRU THE SECTION. ONLY DRILL 1" DEEP.

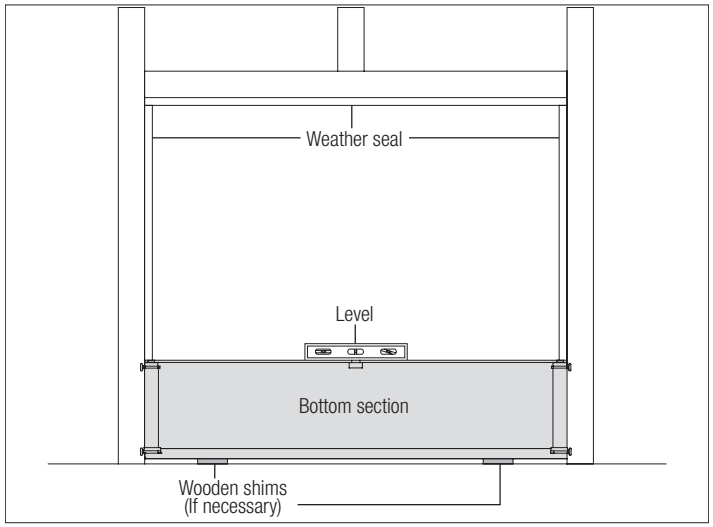
Attach the strut using (2) 1/4"-14 x 1" lag screws at each on each end and center stile (aligned with hinges) locations.



11 Bottom Section

Tools: Level, Wooden shims (if necessary)

Center the bottom section in the door opening. Level the section using wooden shims (if necessary) under the bottom section.



12 Vertical Tracks

Tools: Power Drill, 3/16" Drill bit, 7/16" Socket driver, Tape measure,

IMPORTANT: IF YOUR DOOR IS TO BE INSTALLED PRIOR TO A FINISHING CONSTRUCTION OF THE BUILDING'S FLOOR, THE VERTICAL TRACKS AND THE DOOR BOTTOM SECTION ASSEMBLY SHOULD BE INSTALLED SUCH THAT WHEN THE FLOOR IS CONSTRUCTED, NO DOOR OR TRACK PARTS ARE TRAPPED IN THE FLOOR CONSTRUCTION.

IMPORTANT: THE TOPS OF THE VERTICAL TRACKS MUST BE LEVEL FROM SIDE TO SIDE.

IF THE BOTTOM SECTION WAS SHIMMED TO LEVEL IT, THE VERTICAL TRACK ON THE SHIMMED SIDE MUST BE RAISED THE HEIGHT OF THE SHIM.

Position the left hand vertical track assembly / wall angle track assembly over the track rollers of the bottom section. Make sure the counterbalance lift cable is located between the track rollers and the door jamb. Drill 3/16" pilot holes into the door jamb for the lag screws.

FOR FLAG ANGLE TRACK ASSEMBLIES:

Loosely fasten jamb brackets and flag angle to the jamb using 5/16" x 1-5/8" lag screws, as shown.

FOR WALL ANGLE TRACK ASSEMBLY:

Loosely fasten wall angle to the jamb using 5/16" x 1-5/8" lag screws, as shown.

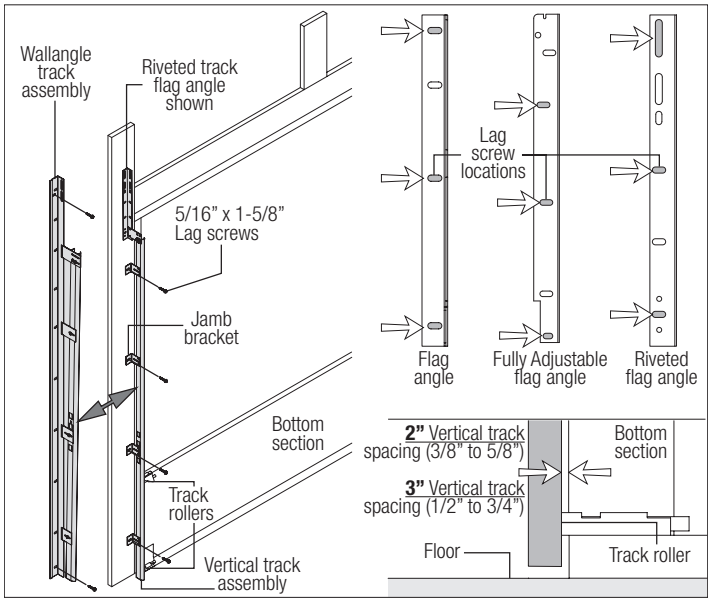
IF YOU HAVE 2" VERTICAL TRACKS:

Tighten lag screws, securing the bottom jamb bracket/bottom slot to jamb, maintain 3/8" to 5/8" spacing, between the bottom section and vertical track.

IF YOU HAVE 3" VERTICAL TRACKS:

Tighten lag screws, securing the bottom jamb bracket/bottom slot to jamb, maintain 1/2" to 3/4" spacing, between the bottom section and vertical track.

Hang counterbalance lift cable over flag angle/wall angle. Repeat same process for other side.



13 Stacking Sections

Tools: Power drill,7/16" Socket driver

NOTE: Make sure graduated end and center hinges are flipped down, when stacking another section on top.

With assistance, lift intermediate I (second) section and guide the track rollers / tandem rollers into the vertical tracks. Lower section until it is seated against bottom section. Keep sections aligned. Repeat same process for other sections, except top section.

FOR GRADUATED END HINGES AND CENTER HINGES:

Starting with the outer graduated end hinges, flip the upper hinge leaf up and secure to the section using (2) 1/4"-20 x 1-7/8" carriage bolts and (2) 1/4"–20 flange hex nuts. Repeat same process for the center hinges.

If you have double graduated end hinges, flip the inner upper hinge leaf up and use it as a template. Mark and pre-drill (2) 1/8" pilot holes, 1" deep into the section using a 1/8" drill bit. Attach the upper hinge leaf to the section using (2) 1/4"-14 x 1" lag screws. Repeat same process for other side.

IF YOU HAVE HALF CENTER HINGES:

Flip the upper hinge leaf up and use it as a template. Mark and pre-drill (2) 1/8" pilot holes, 1" deep into the section using a 1/8" drill bit. Attach the upper hinge leaf to the section using (2) 1/4"-14 x 1" lag screws. Repeat same process for other half center hinges.

IMPORTANT: BE EXTREMELY CAREFUL NOT TO DRILL THRU THE SECTION. ONLY DRILL 1" DEEP.

IMPORTANT: PUSH & HOLD THE HINGE LEAFS SECURELY AGAINST THE SECTIONS WHILE SECURING WITH 1/4"-20 X 1-7/8" CARRIAGE BOLTS AND 1/4"–20 FLANGE HEX NUTS. THERE SHOULD BE NO GAP BETWEEN THE HINGE LEAFS AND THE SECTIONS.

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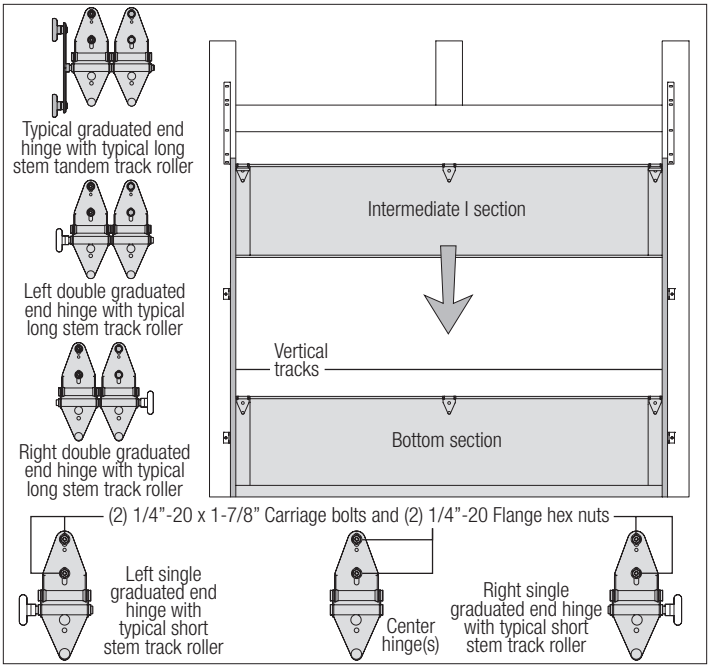
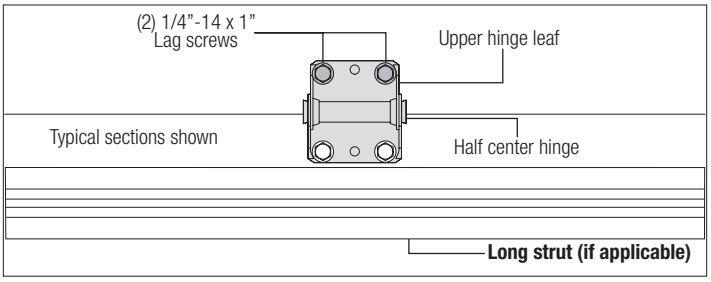

Typical graduated end hinge with typical long stem tandem track roller
Left double graduated end hinge with typical long stem track roller
Right double graduated end hinge with typical long stem track roller
Intermediate I section
Vertical tracks
Bottom section
(2) 1/4"-20 x 1-7/8" Carriage bolts and (2) 1/4"-20 Flange hex nuts
Left single graduated end hinge with typical short stem track roller
Center hinge(s)
Right single graduated end hinge with typical short stem track roller



14 Top Section

Tools: Hammer, Step ladder, Tape measure

Place the top section in the opening. Temporarily secure the top section by driving a nail into the header near the center of the door and bending it over the top section. Now, flip up the graduated end hinge and center hinge leaves, hold tight against section, and fasten center hinges first and end hinges last (refer to step, Stacking Sections). Vertical track alignment is critical. For 2" track, position flag angle/wall angle between 1-11/16" (43 mm) to 1-3/4" (44 mm) from the edge of the door; tighten the bottom lag screw. For 3" track, position flag angle/wall angle between 2-3/16" (56 mm) to 2-1/4" (57 mm) from the edge of the door; tighten the bottom lag screw.

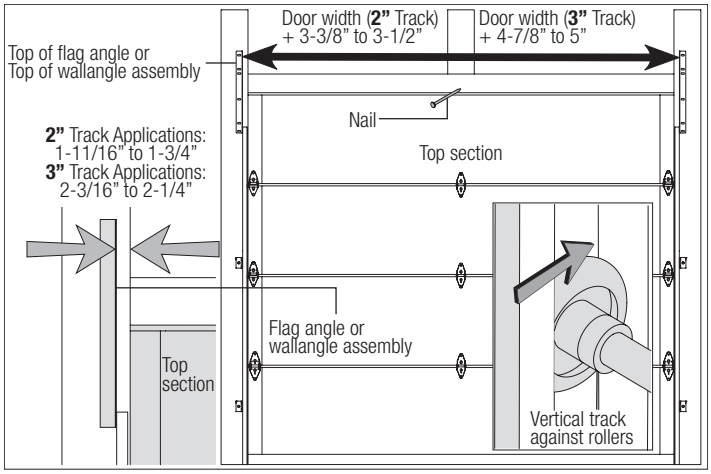
Flag angles/wall angles must be parallel to the door sections. Repeat same process for other side.

IMPORTANT: THE DIMENSION BETWEEN THE FLAG ANGLES MUST BE:

FOR 2" TRACK APPLICATIONS: DOOR WIDTH PLUS 3-3/8" (86MM) TO 3-1/2" (89 MM) FOR SMOOTH, SAFE DOOR OPERATION.

FOR 3" TRACK APPLICATIONS: DOOR WIDTH PLUS 4-7/8" (124MM) TO 5" (127 MM) FOR SMOOTH, SAFE DOOR OPERATION.

Complete the vertical track installation by securing the jamb bracket(s) or slots in the wall angle and tightening the other lag screws. Push the vertical track against the track rollers so that the track rollers are touching the deepest part of the curved side of the track; tighten all the track bolts and nuts. Repeat for other side.


Door width (2" Track) + 3-3/8" to 3-1/2"
Door width (3" Track) + 4-7/8" to 5"
Top of flag angle or Top of wallangle assembly
2" Track Applications: 1-11/16" to 1-3/4"
3" Track Applications: 2-3/16" to 2-1/4"
Nail
Top section
Flag angle or wallangle assembly
Top section
Vertical track against rollers

15 Horizontal Tracks

Tools: Ratchet wrench, 7/16" Socket, 9/16" Socket, 9/16" Wrench,

To install horizontal track, place the curved end over the top track roller of the top section. Align the bottom of the horizontal track with the top of the vertical track. Tighten the horizontal track to the flag angle/wall angle with (2) 1/4"-20 x 9/16" track bolts and (2) 1/4"-20 flange hex nuts.

⚠ WARNING

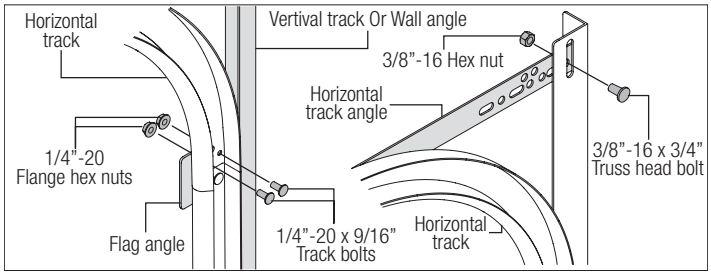
DO NOT RAISE DOOR UNTIL HORIZONTAL TRACKS ARE SECURED AT REAR, AS OUTLINED IN STEP, REAR BACK HANGS, OR DOOR COULD FALL FROM OVERHEAD POSITION CAUSING SEVERE OR FATAL INJURY.

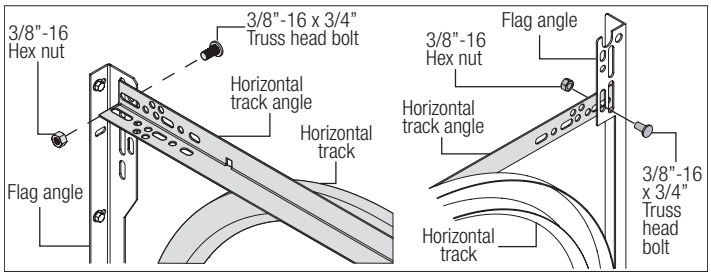
Level the horizontal track assembly and bolt the horizontal track angle to the first encountered slot in the flag angle/wall angle using (1) 3/8"-16 x 3/4" truss head bolt and (1) 3/8"-16 hex nut. Repeat for other side.

Remove the nail that was temporarily holding the top section in place, installed in step, Top Section.

IMPORTANT: FAILURE TO REMOVE NAIL BEFORE ATTEMPTING TO RAISE DOOR COULD CAUSE PERMANENT DAMAGE TO TOP SECTION.

NOTE: If an opener will be installed, position horizontal tracks slightly above level.





16 Adjusting Top Fixtures

Tools: 7/16" Wrench, Step ladder

ADJUSTING TOP FIXTURE SLIDE:

With horizontal tracks installed, you can now adjust the top fixtures. Vertically align the top section of the door with the lower sections. Once aligned, position the top fixture slide(s) out against the horizontal track. Maintaining the slide(s) position, tighten either the 1/4"-20 Flange hex nut (s) or the 5/16"-18 hex nut(s) to secure the top fixture slide(s) to the top fixture base(s). Repeat for other side.

Refer to the illustration to determine if you need to lock each of the top fixture slides into place using (1) 1/4"-20 x 9/16" track bolt and (1) 1/4"-20 flange hex nut through any two aligning holes, as shown.

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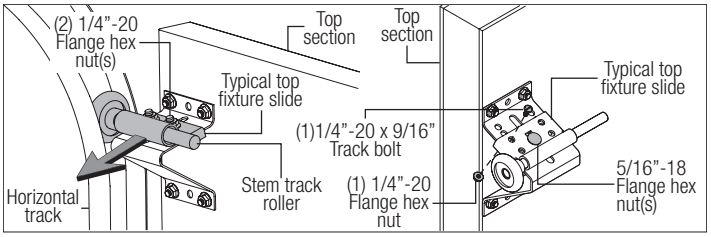
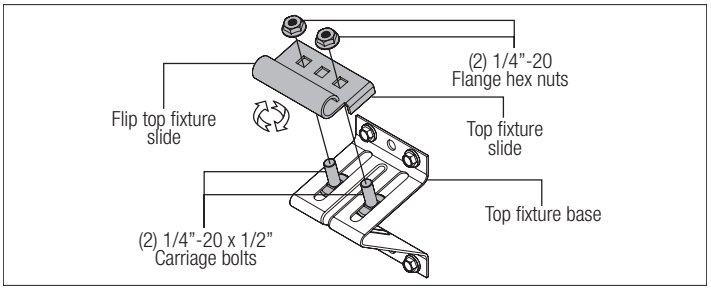


REVERSING THE TOP FIXTURE SLIDE, IF NEEDED:

NOTE: Depending on your application, you may have to reverse the top fixture slide for more adjustability, prior to securing it to the top fixture base.

Remove the top fixture slide by removing the (2) 1/4"-20 flanged hex nuts and the (2) 1/4"-20 x 5/8" carriage bolts. Remove the track roller from the top fixture slide and flip the top fixture slide in the opposite direction. Re-insert the track roller back into the top fixture slide and loosely fasten the top fixture slide to the top fixture base by re-using the (2) 1/4"-20 x 5/8" carriage bolts and (2) 1/4"-20 flange hex nuts. Repeat same process for other side.

Now follow the instructions at the top of this step "Adjusting top fixture slide(s)".



17 Rear Back Hangs

Tools: Ratchet wrench, Socket: 1/2" 5/8", Wrench: 1/2" 5/8", (2) Vice

Raise the door until the top section and half of the next section are in a horizontal position. Do not raise door any further since rear of horizontal tracks are not yet supported.

⚠ WARNING

RAISING DOOR FURTHER CAN RESULT IN DOOR FALLING AND CAUSE SEVERE OR FATAL INJURY.

Clamp a pair of vice clamps onto the vertical tracks just above the second roller on one side, and just below the second track roller on the other side. This will prevent the door from raising or lowering while installing the rear back hangs.

Using perforated angle (may not be supplied), (2) 5/16" x 1-5/8" hex head lag screws and (3) 5/16" bolts with nuts (may not be supplied), fabricate rear back hangs for the horizontal tracks. Attach horizontal tracks to the rear back hangs with 5/16"-18 x 1 hex bolts and nuts (may not be supplied). Horizontal tracks must be level and parallel with door within 3/4" to 7/8" maximum of door edge.

⚠ WARNING

KEEP HORIZONTAL TRACK PARALLEL AND WITHIN 3/4" TO 7/8" MAXIMUM OF DOOR EDGE, OTHERWISE DOOR COULD FALL, RESULTING IN SEVERE OR FATAL INJURY.

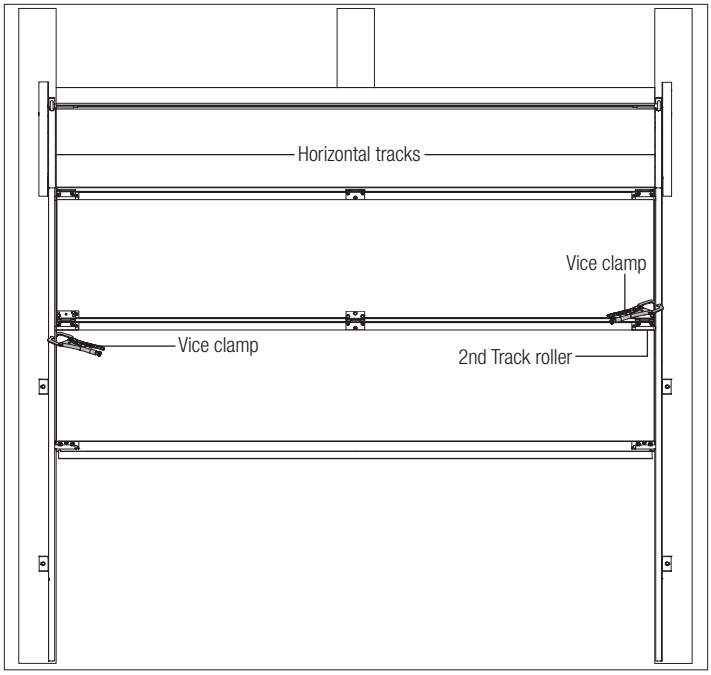
IMPORTANT: DO NOT SUPPORT THE WEIGHT OF THE DOOR ON ANY PART OF THE HORIZONTAL TRACK HANGER THAT CANTILEVERS 4" OR MORE BEYOND A SOUND FRAMING MEMBER.

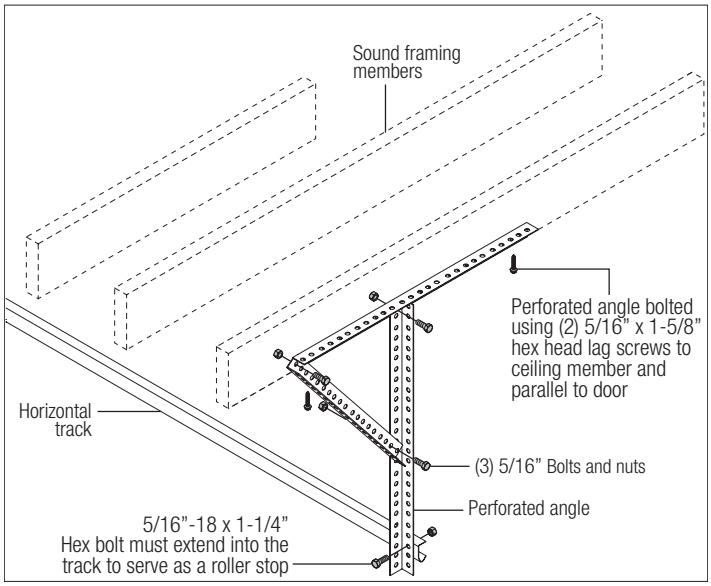
NOTE: If rear back hangs are to be installed over drywall, use (2) 5/16" x 2" hex head lag screws and make sure lag screws engage into solid structural lumber.

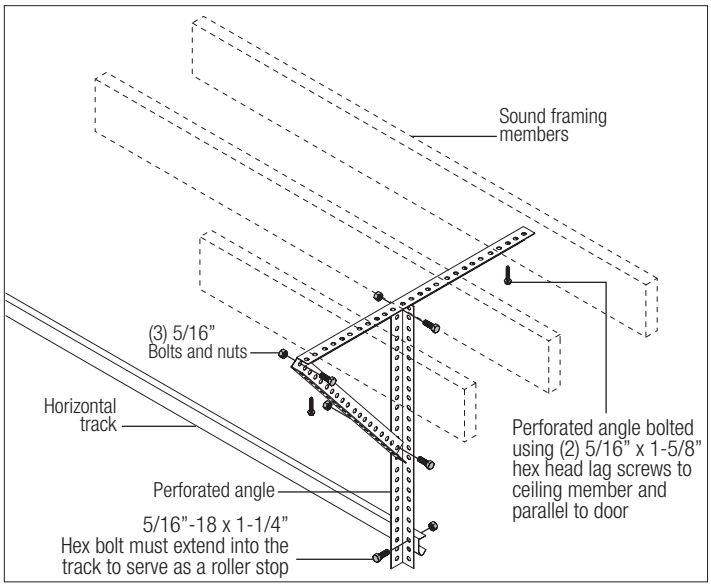
NOTE: 26" angle must be attached to sound framing members and nails should not be used.

Now, permanently attach the weatherstrips on both door jambs and header. The weatherstrips were temporarily attached in Preparing the Opening, in the pre-installation section of this manual.

NOTE: When permanently attaching the weatherstrips to the jambs, avoid pushing the weatherstrips too tightly against the face of door.




Sound framing members
Perforated angle bolted using (2) 5/16" x 1-5/8" hex head lag screws to ceiling member and parallel to door
Horizontal track
(3) 5/16" Bolts and nuts
Perforated angle
5/16"-18 x 1-1/4" Hex bolt must extend into the track to serve as a roller stop


Sound framing members
(3) 5/16" Bolts and nuts
Horizontal track
Perforated angle bolted using (2) 5/16" x 1-5/8" hex head lag screws to ceiling member and parallel to door
Perforated angle
5/16"-18 x 1-1/4" Hex bolt must extend into the track to serve as a roller stop

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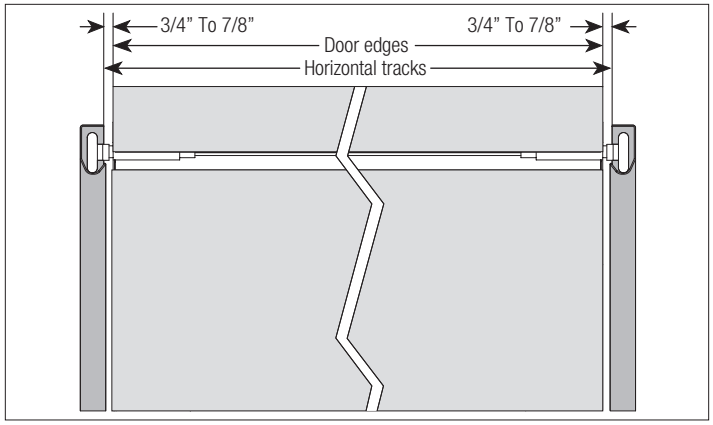


18 Attaching Front Cable Lift Sheaves

Tools: 3/8" Wrench, Tape Measure

Measure the front cable lift sheaves to determine if they are 3 or 4 inches. Starting on the left hand side and using (1) 3/8"-16 hex nut, attach the front cable lift sheave into the appropriate hole, as shown).

IF YOU HAVE 3" FRONT CABLE LIFT SHEAVES AND A 12" RADIUS HORIZONTAL TRACK:

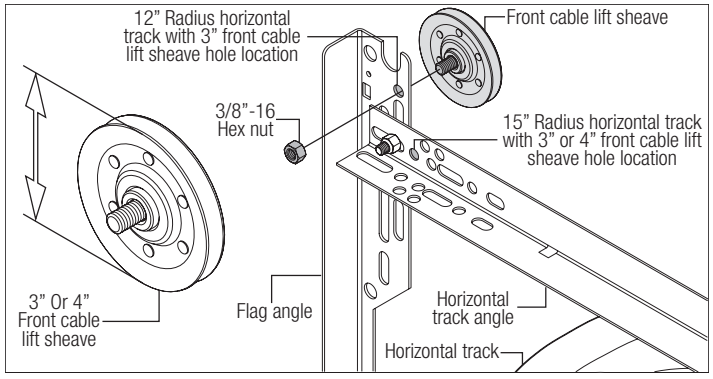
Secure the front cable lift sheave to the 13/32" hole near the top of the flag angle using (1) 3/8"-16 hex nut, as shown.

IF YOU HAVE 3" OR 4" FRONT CABLE LIFT SHEAVES AND A 15" RADIUS HORIZONTAL TRACK:

Bolt the front cable lift sheave to the first 13/32" hole in the horizontal track angle, using (1) 3/8"-16 hex nut, as shown.

Repeat the same process for right hand side.

Remove the locking pliers from the vertical tracks. With assistance, raise the door slowly into the open position making sure the door travels smoothly through the tracks. Clamp locking pliers to the back leg of both horizontal tracks, below the bottom track rollers to keep the door from lowering.


12" Radius horizontal track with 3" front cable lift sheave hole location
Front cable lift sheave
3/8"-16 Hex nut
15" Radius horizontal track with 3" or 4" front cable lift sheave hole location
3" Or 4" Front cable lift sheave
Flag angle
Horizontal track angle
Horizontal track

19 Attaching Extension Springs

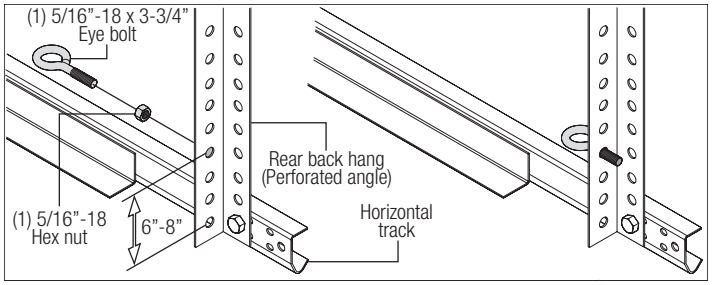
Tools: 3/8" Wrench

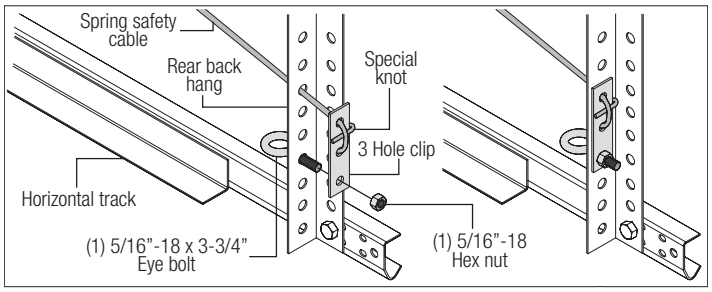
Position (1) 5/16"-18 x 3-3/4" eye bolt and (1) 5/16"-18 hex nut in the rear back hang, 6" to 8" above the horizontal track, as shown. Feed the snubber cable through the rear back hang and tie the special knot around the "room side" of the 3 hole clip, as shown. Secure the eye bolt and 3 hole clip to the rear back hang with (1) 5/16" - 18 hex nut. Hook one end of the extension spring onto the eye bolt. Feed the snubber cable through the rear extension spring loop and center of the extension spring then front spring loop, pull the snubber cable taut and tie the special knot around the "jamb side" of the 3 hole clip. Attach the "jamb side" 3 hole clip to the jamb near the flag angle with (1) 5/16" x 1-5/8" lag bolt.

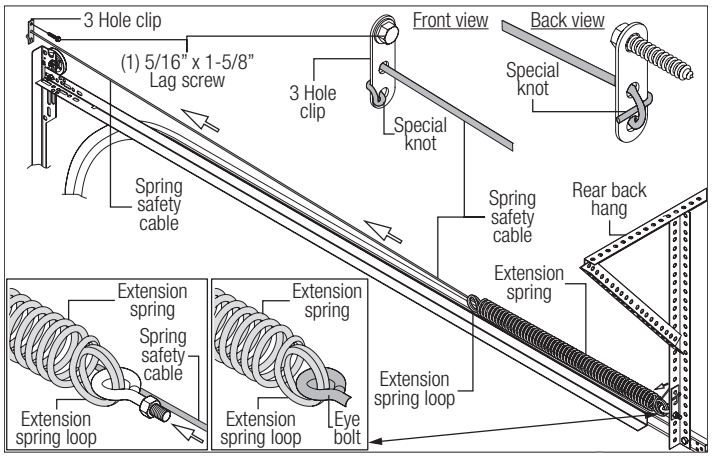
NOTE: Snubber cables must be taut.

⚠ WARNING

FAILURE TO INSTALL SNUBBER CABLES CAN RESULT IN SEVERE OR FATAL INJURY IN CASE OF SPRING BREAKAGE.







20 Attaching Spring Sheaves

Tools: 3/8" Wrench

Hook the sheave fork through the front loop of the extension spring and attach the sheave fork to the rear cable lift sheave using (1) 3/8"-16 x 1-1/4" hex head bolt and (1) 3/8"-16 hex nut.

Thread the counterbalance lift cable over the front cable lift sheave and around the rear cable lift sheave and tie the special knot around the "horizontal angle" using a 3 hole clip, as shown.

Insert one end of the large "S" hook into the "horizontal angle" with the 3 hole clip and the other end into the second slot of the horizontal angle, as shown.

Repeat for the other side.

IMPORTANT: CLOSE "S" HOOKS AND EYE BOLTS TO PREVENT SPRINGS FROM COMING LOOSE.

⚠ WARNING

FAILURE TO CLOSE "S" HOOKS AND EYE BOLTS CAN RESULT IN SEVER OR FATAL INJURY IF SPRINGS COME LOOSE.

NOTE: Some larger doors feature 2 pairs of extension springs. A snubber cable must be installed through each spring.

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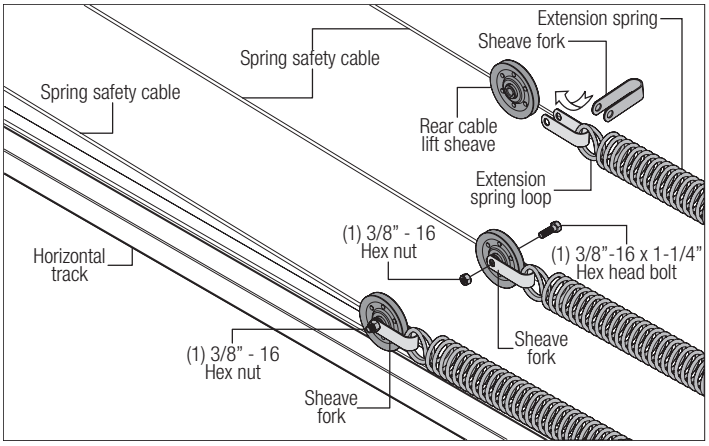
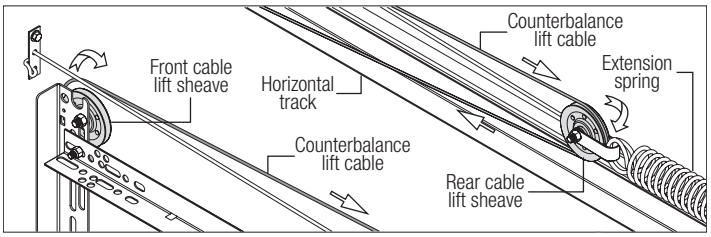
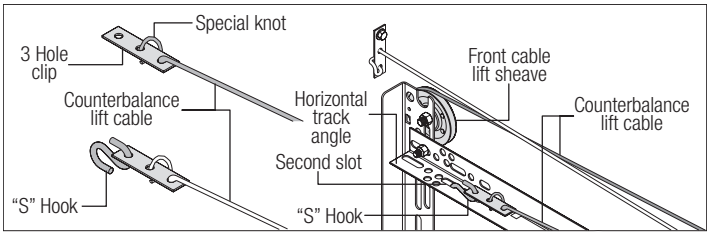
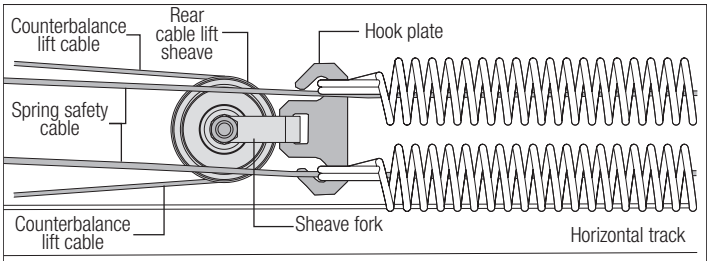








This illustrations shows doors featuring (2) pairs of extension springs

21 Cable Adjustments

Tools: None

Adjust counterbalance lift cables to create about 1" to 2" (25 mm to 50 mm) of initial extension spring stretch, with the door in the fully opened position.

Measure relaxed extension spring length for your door height and verify with chart. Spring length must be the same for both extension springs to allow even door balance.

Carefully remove the locking pliers from the horizontal track and lower the door into the closed position.

Once the door is closed, measure the extension spring length in tension for both sides. Using the chart, verify the spring length in tension, is correct with your door height.

NOTE: It may be necessary to adjust spring length for proper door balance.

DOOR HEIGHT	Spring Length Relaxed (Door Open)	Spring Length Extended (Door Closed)
6'0"	**25"** (635 mm)	**61" (1549 mm)**
6'3"	**25"** (635 mm)	**62.5" (1588 mm)**
6'6"	**25"** (635 mm)	**64" (1626 mm)**
7'0"	**25"** (635 mm)	**67" (1702 mm)**
7'6"	**27"** (686 mm)	**72" (1829 mm)**
7'9"	**27"** (686 mm)	**73.5" (1867 mm)**
8'0"	**27"** (686 mm)	**75" (1905 mm)**

22 Final Adjustments

Tools: None

Now lift the door and check its balance. If the door is hard to pull down or lifts by itself, adjust extension spring length by moving the "S" hook backward (towards the rear back hangs) to a different hole in the horizontal angle.

If the door is difficult to lift or too easy to pull down, adjust extension spring length by moving the "S" hook forward (towards the header) to a different hole in the horizontal angle.

IMPORTANT: WHENEVER ADJUSTING EXTENSION SPRING LENGTH FOR DOOR BALANCE, ALWAYS OPEN THE DOOR TO THE FULLY OPEN POSITION AND RETURN THE LOCKING PLIERS TO THE HORIZONTAL TRACKS BELOW THE BOTTOM TRACK ROLLERS.

If the door still does not operate easily, lower the door into the closed position and recheck the following items:

1.) Check the door for level.

2.) Check the distance between flag angles – must be door width plus 3-3/8" + 1/4" – 0".

3.) Check the counterbalance lift cables for equal tension- adjust by re-tieing the special knot.

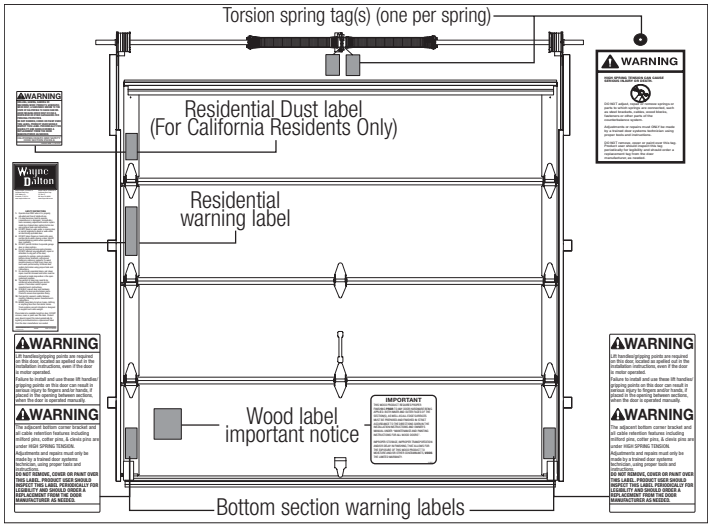
23 Label Placement

Tools: Step Ladder

IMPORTANT: USING THE ILLUSTRATION, ATTACH THE APPROPRIATE LABELS TO THE APPROPRIATE LOCATION ON THE SECTION, AS SHOWN.

NOTE: The Spring Warning tag(s) are factory attached (one per spring).

NOTE: Because of different configurations, some labels may require minor relocations.



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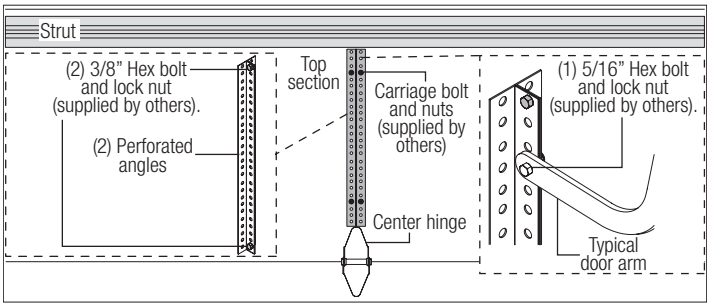
Door Arm Hookup

Tools: Needle nose pliers

At the center of the top section, measure horizontally from the top of center hinge to the bottom of strut. Using that dimension, measure and cut (2) pieces of perforated angles. Assemble the (2) pieces together using (2) 3/8" bolts and nuts (supplied by others). Now, secure to the top section using carriage bolts and nuts (supplied by others), thru bolt both the perforated angles to the top section, as shown.

Align the door arm with hole with one of the holes in the perforated angles. Secure the door arm to the perforated angle using (1) 5/16" – 18 x 1" hex head bolt and (1) 5/16" – 18 lock nut (supplied by others), as shown.


Strut
(2) 3/8" Hex bolt and lock nut (supplied by others).
(2) Perforated angles
Top section
Carriage bolt and nuts (supplied by others)
Center hinge
(1) 5/16" Hex bolt and lock nut (supplied by others).
Typical door arm

Lift Handles

Tools: Power drill, 1/8" Drill bit, Tape measure

NOTE: Lift handles must be lined up vertically.

Bottom Section:

Locate the exterior center stile or center most stile on the bottom section.

NOTE: For flush doors, find the center most stile by locating the center most hinge.

Using the bottom hole of the lift handle, measure up 3" from the bottom of bottom section. Mark the hole locations and drill (2) 9/32" dia. holes through the bottom section. On the outside of the door, insert (2) 1/4" - 20 x 2 1/2" carriage bolts (black head) into the outside lift handle and insert the assembly into the (2) pre-drilled holes in the bottom section. From the inside, slide the (2) holes in the inside lift handle over the stems of the carriage bolts. Secure the outside and inside lift handle to the bottom section with (2) 1/4" – 20 flange hex nuts.

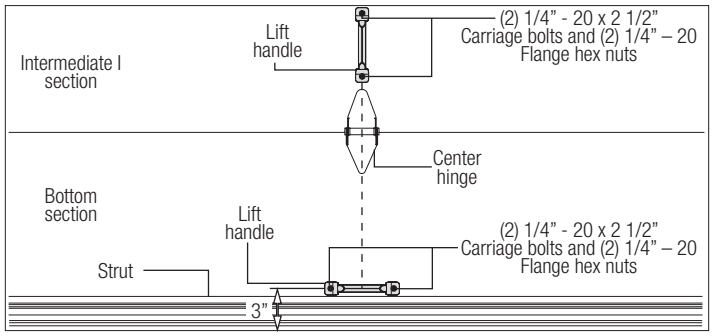
Intermediate I Section:

Locate the exterior center stile or center most stile on the Intermediate I section. Mark a vertical line on the section at that point.

NOTE: Some Garage Doors may require both lift handles to be installed on bottom section. If your bottom section height is 28" or 29", install both lift handles onto the bottom section. Install bottom lift handle per above instructions, then install the second lift handle a Minimum of 20" and a Maximum of 30" above the bottom lift handle.

Measure up 4" from the bottom of the Intermediate I section. Using this measurement as a guide, position the bottom hole of the lift handle bottom at the mark. Make a mark at the top hole of the lift handle. This should give you a Minimum of 20" and a Maximum of 30" between the lower lift handle and the middle of the top lift handle. If needed, reposition the lift handle to stay within the Minimum and Maximum dimensions, as stated above.

Using the lift handle as a template, mark the hole locations and drill (2) 9/32" dia. holes through the section. On the outside of the door, insert (2) 1/4" - 20 x 2 1/2" carriage bolts (black head) into the outside lift handle and insert the assembly into the (2) pre-drilled holes in the section. From the inside, slide the (2) holes in the inside lift handle over the stems of the carriage bolts. Secure the outside and inside lift handle to the section with (2) 1/4" – 20 flange hex nuts.


Intermediate I section
Lift handle
(2) 1/4" - 20 x 2 1/2" Carriage bolts and (2) 1/4" – 20 Flange hex nuts
Center hinge
Bottom section
Lift handle
(2) 1/4" - 20 x 2 1/2" Carriage bolts and (2) 1/4" – 20 Flange hex nuts
Strut
3"

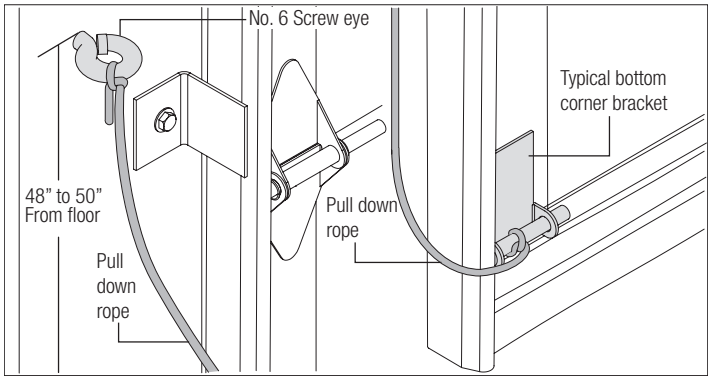
Pull Down Rope

Tools: Power drill, 1/8" Drill bit, Tape measure

⚠ WARNING

DO NOT INSTALL PULL DOWN ROPE ON DOORS WITH OPERATORS. CHILDREN MAY BECOME ENTANGLED IN THE ROPE CAUSING SEVERE OR FATAL INJURY.

Measure and mark the jamb approximately 48" to 50" (1220 to 1270 mm) from floor on the right or left side of jamb. Drill 1/8" pilot hole for no. 6 screw eye. Tie the pull down rope to the no. 6 screw eye and to the bottom corner bracket, as shown.



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Cleaning Your Garage Door

IMPORTANT: DO NOT USE A PRESSURE WASHER ON YOUR GARAGE DOOR!

An annual inspection of all the surfaces of your garage door(s) will reveal the extent of weathering and the possible need for refinishing. When the finish becomes eroded or thin, clean and prime any areas showing deterioration. Then completely refinish the door, according to the directions, listed below, or the manufacturer's label directions. Proper finishing of the wood substrates to protect your door(s) from the effects of moisture and sunlight is vital in extending the service life and beautifying your garage door(s).

The interior and exterior surfaces, as well as all edges must be properly primed, painted and maintained, to protect and beautify your door. These finishing instructions are intended to achieve both objectives for your wood doors(s).

NOTE: Be sure to clean behind weatherstrips on both sides and top of door.

CAUTION: NEVER MIX CLEANSERS OR DETERGENTS WITH BLEACH.

GLASS CLEANING INSTRUCTIONS

Clean with a mild detergent solution (same as above) and a soft cloth. After cleaning, rinse thoroughly.

ACRYLIC CLEANING INSTRUCTIONS

Clean acrylic glazing with nonabrasive soap or detergent and plenty of water. Use your bare hands to feel and dislodge any caked on particles. A soft, grit-free cloth, sponge or chamois may be used to wipe the surface. Do not use hard or rough cloths that will scratch the acrylic glazing. Dry glazing with a clean damp chamois.

NOTE: Do not use any window cleaning fluids, scouring compounds, gritty cloths or solvent-based cleaners of any kind.

Clean all surfaces of dust, dirt and any other contaminants. Any scarring or stains that occur during transportation, handling or storage must be re-sanded to the original condition.

Painting Your Garage Door

A high quality exterior 100% Acrylic Latex based finish paint is recommended for painting your wood door. FOR BEST RESULTS DO NOT USE A DARK COLOR PAINT. HIGH HEAT ABSORPTION CAN CAUSE EXCESSIVE BOWING AND CRACKING OF THE WOOD. If priming is necessary, prime the interior and exterior surfaces, as well as all edges, using a primer compatible with the selected finish paint and for the specific species of wood substrate being finished.

NOTE: Some species of wood, such as cedar, require special primers and finishes to prevent tannin stains from appearing. Consult with your paint supplier.

If the door is factory primed by Wayne-Dalton, the priming step is not required, except if touch-up is needed due to surface preparation and re-sanding.

NOTE: Wayne-Dalton uses a latex primer.

Finish paint the interior and exterior surfaces, as well as all edges with at least 2 coats of a high quality exterior 100% Acrylic Latex finish paint over the primer. Follow paint manufacture's label directions explicitly for all coatings.

IMPORTANT: THE FOLLOWING TOP COATS ARE NOT RECOMMENDED. SHAKE AND SHINGLE PAINTS, CLEAR COATINGS, OIL OR ALKYD PAINTS, VINYL ACETATE (PVA), VINYL ACRYLIC OR VINYL ACETATE ACRYLIC CO-POLYMER PAINTS.

Clear Or Stained Finishes

If staining, select an exterior grade stain, approved for use on the species of wood substrates being finished and compatible with Alkyd varnishes. FOR BEST RESULTS DO NOT USE A DARK STAIN. HIGH HEAT ABSORPTION CAN CAUSE EXCESSIVE BOWING AND CRACKING OF THE WOOD. Apply the stain to the interior and exterior surfaces, as well as all edges, following stain manufacturer's label directions. After proper drying time for the stain, or if wood is being left natural, apply 1 coat of waterproof exterior Alkyd varnish (marine type varnish) to the interior and exterior surfaces, as well as all edges. After recommended drying time of 1st coat, sand all surfaces with fine grit (320) sandpaper. Clean all surfaces of sanding dust and apply a 2nd coat of the Alkyd varnish to the interior and exterior surfaces, as well as all edges. After 2nd coat is dry, sand all surfaces again with fine grit (320) sandpaper. Clean all surfaces of sanding dust and apply a final 3rd coat of the Alkyd varnish to all surfaces.

Three finish coats of waterproof exterior Alkyd varnish are required to properly finish a stained or natural wood door. Follow the finish manufacturer's label directions explicitly for each coat applied.

NOTE: Do not stain MDO plywood, apply paint only.

Only a waterproof exterior Alkyd varnish top coat finish is approved for stained or natural wood doors. Other types of top coat finishes, including deck sealers, are not acceptable and if used, will void the warranty.

Operation and Maintenance

OPERATING YOUR GARAGE DOOR:

Before you begin, read all warning labels affixed to the door and the installation instructions and owner's manual. When correctly installed, your Wayne-Dalton door will operate smoothly. Always operate your door with controlled movements. Do not slam your door or throw your door into the open position, this may cause damage to the door or its components. If your door has an electric opener, refer to the owner's manual to disconnect the opener before performing manual door operation below.

Manual door operation:

For additional information on manual garage door operations go to **www.dasma.com** and reference TDS 165.

IMPORTANT: DO NOT PLACE FINGERS OR HANDS INTO SECTION JOINTS WHEN OPENING AND/OR CLOSING A DOOR. ALWAYS USE LIFT HANDLES / SUITABLE GRIPPING POINTS WHEN OPERATING THE DOOR MANUALLY.

Opening a Door: Make sure the lock(s) are in the unlocked position. Lift the door by using the lift handles / suitable gripping points only. Door should open with little resistance.

Closing a Door: From inside the garage, pull door downward using lift handles / gripping point only or a high friction area only. If you are unable to reach the lift handles/ suitable gripping points only, use pull down rope affixed to the side of door. Door should close completely with little resistance.

Using an electric operator:

IMPORTANT: PULL DOWN ROPES MUST BE REMOVED AND LOCKS MUST BE REMOVED OR MADE INOPERATIVE IN THE UNLOCKED POSITION.

When connecting a drawbar (trolley type) garage door operator to this door, an drawbar operator and or drawbar operator bracket must be securely attached to the top section of the door, along with any struts provided with the door. Always use the drawbar operator and or drawbar operator bracket supplied with the door. To avoid possible damage to your door, Wayne-Dalton recommends reinforcing the top section on models 8000, 8100, 8200 and 9100 doors with a strut (may or may not be supplied). The installation of the drawbar operator must be according to manufacturer's instructions and force settings must be adjusted properly. Refer to the owner's manual supplied with your drawbar operator for complete details on installation, operation, maintenance and testing of the operator.

MAINTAINING YOUR GARAGE DOOR:

Before you begin, read all warning labels affixed to the door and the installation instructions and owner's manual. Perform routine maintenance steps once a month, and have the door professionally inspected once a year. Review your Installation Instructions and Owner's Manual for the garage door. These instructions are available at no charge from Wayne-Dalton, A Division Of Overhead Door Corporation, P.O. Box 67, Mt. Hope, OH., 44660, or at **www.wayne-dalton.com**. For additional information on garage door/operator maintenance go to **www.dasma.com** and reference TDS 151, 167 and 179.

Monthly Inspections:

1. Visual Inspection: Closely inspect jambs, header and mounting surface. Any wood found not to be structurally sound must be replaced. Inspect the springs, counterbalance lift cables, track rollers, pulleys, rear back hangs and other door hardware for signs of worn or broken parts. Tighten any loose screws and/or bolts. Check exterior surface of the door sections for any minor cracks. Verify door has not shifted right or left in the opening. If you suspect problems, have a trained door system technician make the repairs.

⚠ WARNING

GARAGE DOOR SPRINGS, COUNTERBALANCE LIFT CABLES, BRACKETS, AND OTHER HARDWARE ATTACHED TO THE SPRINGS ARE UNDER EXTREME TENSION, AND IF HANDLED IMPROPERLY, CAN CAUSE SEVERE OR FATAL INJURY. ONLY A TRAINED DOOR SYSTEMS TECHNICIAN SHOULD ADJUST THEM, BY CAREFULLY FOLLOWING THE MANUFACTURER'S INSTRUCTIONS.

⚠ WARNING

NEVER REMOVE, ADJUST, OR LOOSEN THE BOLTS, SCREWS AND/OR LAG SCREWS ON THE COUNTERBALANCE (END OR CENTER BEARING BRACKETS) SYSTEM OR BOTTOM CORNER BRACKETS OF THE DOOR. THESE BRACKETS ARE CONNECTED TO THE SPRING(S) AND ARE UNDER EXTREME TENSION. TO AVOID POSSIBLE SEVERE OR FATAL INJURY, HAVE ANY SUCH WORK PERFORMED BY A TRAINED DOOR SYSTEMS TECHNICIAN USING PROPER TOOLS AND INSTRUCTIONS.

TorqueMaster® Plus Springs: Pawl knob(s) (located on the TorqueMaster® end brackets above the door) should be engaged to prevent the door from rapidly descending in case of spring failure or forceful manual operation.

Torsion Springs: The torsion springs (located above the door) should only be adjusted by a trained door systems technician. DO NOT attempt to repair or adjust torsion springs yourself.

Extension Springs: A restraining cable or other device should be installed on the extension spring (located above the horizontal tracks) to help contain the spring if it breaks.

2. Door Balance: Periodically test the balance of your door. If you have a garage door drawbar operator, use the release mechanism so you can operate the door by hand when doing this test. Start with the door in the fully closed position. Lift the door to check its balance. Adjust TorqueMaster® or Extension spring(s), if door lifts by itself (hard to pull down) or if door is difficult to lift (easy to pull down). DO NOT attempt to repair or adjust Torsion Springs yourself. To adjust TorqueMaster® or Extension spring(s), refer to your installation instructions and owner's manual. If in question about any of the procedures, do not perform the work. Instead, have it adjusted by a trained door systems technician.

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3. Lubrication: The door should open and close smoothly. Ensure the door track rollers are rotating freely when opening and closing the door. If track rollers do not rotate freely, clean the door tracks, removing dirt and any foreign substances. Clean and lubricate (use a non-silicon based lubricant) graduated end hinges, steel track rollers, spring(s) and bearings. DO NOT lubricate plastic idler bearings, nylon track rollers, door track. DO NOT oil a cylinder lock, if actuation is difficult use a graphite dust to lubricate.

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Limited warranty

Wayne Wood, Raised Panel, 105/110, 310/311

Subject to the terms and conditions contained in this Limited Warranty, Wayne-Dalton ("Manufacturer") warrants the sections of the door, against defects in material and workmanship, for a period of **ONE (1) YEAR** from the time of delivery provided:

i) (i) The interior and exterior surfaces, as well as all edges of the wood door(s) are properly finished according to the Manufactures Maintenance and Painting Instructions and finish manufacturer's instructions. All surfaces of the wood door(s) must be completely finished (3 total coats, including primer coat) prior to installation, to ensure that the interior and exterior surfaces, as well as all edges of the doors are properly protected against moisture or other contaminants. Wood doors, in a non-finished condition, must be transported and stored so the wood surfaces are NOT exposed to moisture or other contaminants. If the door(s) is not finished within **TEN (10) DAYS** of delivery, this warranty shall only extend to defects in workmanship and materials that appear within **ONE (1) MONTH**. IMPROPER TRANSPORTATION, STORAGE OR DELAYS IN FINISHING, THAT ALLOWS EXPOSURE OF THE WOOD DOOR SURFACES TO MOISTURE OR OTHER CONTAMINANTS WILL RESULT IN THE WARRANTY BEING VOIDED.

The Manufacturer warrants the garage door hardware, tracks and springs of the above-described door, for a period of **ONE (1) YEAR** from the date of installation, against defects in material and workmanship, subject to all the terms and conditions below.

The Manufacturer will not be responsible for grain and color variations of natural wood. These natural variations in grain and color are not product defects, and therefore will not be considered under this Limited Warranty.

The Manufacturer uses high quality material for framework, door skins, overlays, and panel materials. Exposure of wood to the environment may cause bowing, checking and/or cracking of a door section regardless of efficiency of painting. This is not considered a defect; it is an uncontrollable characteristic of natural wood. The dealer and the end user have the responsibility to select the type of material and/ or door which will offer the best results and longevity for the climate and/or environmental condition in which they will use the product.

This Limited Warranty is extended only to the person who purchased the product and continues to own the premises (where the door is installed) as his/her primary residence ("Buyer"). This Limited Warranty does not apply to residences other than primary, or to commercial or industrial installations, or to installations on rental property (even when used by a tenant as a residence). This Limited Warranty is not transferable to any other person (even when the premises is sold), nor does it extend benefits to any other person. As a result this Limited Warranty does NOT apply to any person who purchases the product from someone other than an authorized Wayne-Dalton dealer or distributor.

The Manufacturer will not be responsible for any damage attributable to improper storage, improper installation, or any alteration of the door or its components, abuse, damage from corrosive fumes or substances, salt spray or saltwater air, fire, Acts of God, failure to properly maintain the door, or attempt to use the door, its components or related products for other than its intended purpose and its customary usage. This Limited Warranty does not cover ordinary wear. This Limited Warranty will be voided if any holes are drilled into the door, other than those specified by the Manufacturer.

THIS LIMITED WARRANTY COVERS A CONSUMER PRODUCT AS DEFINED BY THE MAGNUSON-MOSS ACT. NO WARRANTIES,

EXPRESS OR IMPLIED (INCLUDING BUT NOT LIMITED TO THE WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE) WILL EXTEND BEYOND THE TIME PERIOD SET FORTH IN **UNDERSCORED BOLD FACE** TYPE IN THIS LIMITED WARRANTY, ABOVE.

• • Some States do not allow limitations on how long an implied warranty lasts, so the above limitations may not apply to you.

Any claim under this Limited Warranty must be made in writing, within the applicable warranty period, to the dealer from which the product was purchased. Unless the dealer is no longer in business, a written claim to the Manufacturer will be the same as if no claim had been made at all.

At the Manufacturer's option, pursuant to the dealer having notified the Manufacturer of a warranty claim, a service representative may inspect the product on site, or Buyer may be required to return the product to the Manufacturer at Buyer's expense. Buyer agrees to cooperate with any representative of the Manufacturer and to give such representative full access to the product with the claimed defect and full access to the location of its installation.

If the Manufacturer determines that the claim is valid under the terms of this Limited Warranty, the Manufacturer will cause the defective product to be repaired or replaced. The decision about the manner in which the defect will be remedied will be at the discretion of the Manufacturer, subject to applicable law. THE REMEDY WILL COVER ONLY MATERIAL. THIS LIMITED WARRANTY DOES NOT COVER OTHER CHARGES, SUCH AS FIELD SERVICE LABOR FOR REMOVAL, INSTALLATION, PAINTING, SHIPPING, ETC.

Any repairs or replacements arranged by Manufacturer will be covered by (and subject to) the terms, conditions, limitations and exceptions of this Limited Warranty; provided, however, that the installation date for the repaired or replaced product will be deemed to be the date the original product was installed, and this Limited Warranty will expire at the same time as if there had been no defect. If a claim under this Limited Warranty is resolved in a manner other than described in the immediately preceding paragraph, then neither this Limited Warranty nor any other warranty from the Manufacturer will cover the repaired or replaced portion of the product.

THE REMEDIES FOR THE BUYER DESCRIBED IN THIS LIMITED WARRANTY ARE EXCLUSIVE and take the place of any other remedy. The liability of the Manufacturer, whether in contract or tort, under warranty, product liability, or otherwise, will not go beyond the Manufacturer's obligation to repair or replace, at its option, as described above. THE MANUFACTURER WILL NOT UNDER ANY CIRCUMSTANCES BE LIABLE FOR SPECIAL, INCIDENTAL, OR CONSEQUENTIAL DAMAGES, including (but not limited to) damage or loss of other property or equipment, personal injury, loss of profits or revenues, business or service interruptions, cost of capital , cost of purchase or replacement of other goods, or claims of third parties for any of the foregoing.

• • Some States do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation or exclusion may not apply to you.

No employee, distributor, dealer, representative, or other person has the authority to modify any term or condition contained in this Limited Warranty or to grant any other warranty on behalf of or binding on the Manufacturer, and anyone's attempt to do so will be null and void.

Buyer should be prepared to verify the date of installation to the satisfaction of the Manufacturer.

The rights and obligations of the Manufacturer and Buyer under this Limited Warranty will be governed by the laws of the State of Ohio, USA, to the extent permitted by law.

• • This Limited Warranty gives you specific legal rights and you may also have other rights, which may vary from State to State.

****NOTE:** Variations in color or graining of natural wood is not considered a product defect, and therefore not covered under the limited warranty.

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Covered by one or more of the following Patents; 5,408,724; 5,409,051; 5,419,010; 5,495,640; 5,522,446; 5,562,141; 5,566,740; 5,568,672; 5,718,533; 6,019,269; 6,089,304; 6,644,378; 6,374,567; 6,561,256; 6,527,037; 6,640,872; 6,672,362; 6,725,898; 6,843,300; 6,915,573; 6,951,237; 7,014,386; 7,036,548; 7,059,380; 7,121,317; 7,128,123; 7,134,471; 7,134,472; 7,219,392; 7,254,868. Canadian: 2,384,936; 2,477,445; 2,495,175; 2,507,590; 2,530,701; 2,530,74; 2, 2,532,824. Other US and Foreign Patents pending.

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Thank you for your purchase.

AFTER INSTALLATION IS COMPLETE, FASTEN THIS MANUAL NEAR THE GARAGE DOOR.